60.19

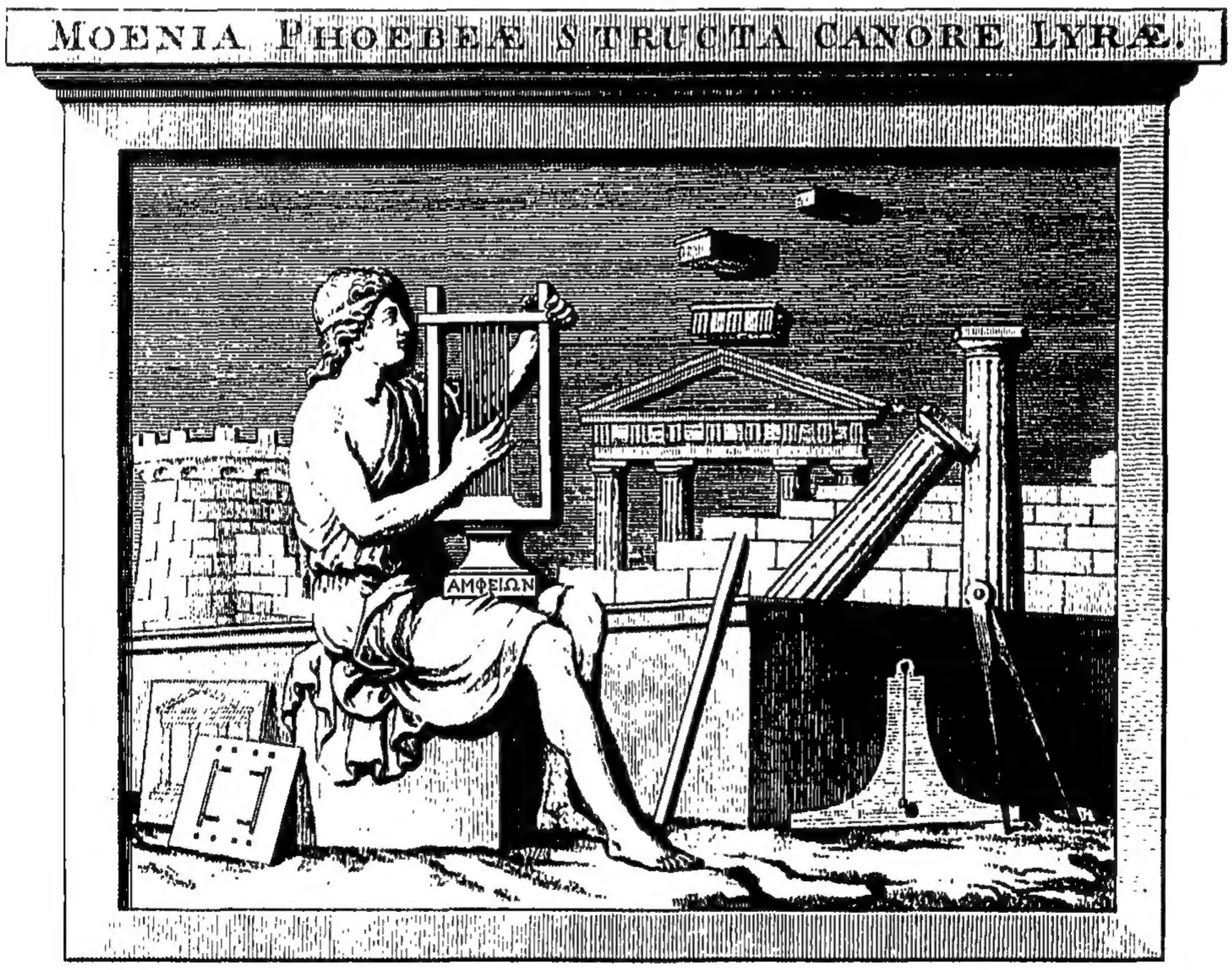
THE GRECIAN ORDERS OF ARCHITECTVRE.

DELINEATED AND EXPLAINED FROM THE ANTIQVITIES OF ATHENS

ALSO

THE PARALLELS OF THE ORDERS OF PALLADIO SCAMOZZI AND VIGNOLA

TO WHICH ARE ADDED REMARKS CONCERNING PVBLICK AND PRIVATE EDIFICES WITH DESIGNS.



LONDON.

PRINTED BY J. DIXWELL, FOR THE AVTHOR MDCCLXVIII.

TO·JAMES·STVART· ESQ. F. R. S.

PAINTER·AND·ARCHITECT·

WHO·THREE·CENTVRIES·

AFTER·THE·REVIVAL·OF·LETTERS·

WAS·THE·FIRST·

TO·EXPLORE·AMONGST·THE·RVINS·OF·ATHENS·

AND·TO·PVBLISH·TO·THE·WORLD·

THE·GENVINE·FORMS·OF·GRECIAN·ARCHITECTVRE·

EXACTLY·DELINEATED·BY·HIS·SKILL·AND·CARE·

ILLVSTRATED·BY·HIS·ERVDITION·

THVS·RESCVING·FROM·THAT·OBLIVION·INTO·WHICH·

THE·CEASELESS·INSVLTS·OF·BARBARIANS·

WOVLD·SOON·HAVE·PLVNGED·THEM·

THE.MOST·EXCELLENT·MODELS·OF·THE·ART·

WHICH·HE·HAS·TRANSMITTED·

WITH·HIS·OWN·REPVTATION·TO·FVTVRE·AGES·

TO·HIM·

THIS·WORK·IS·THEREFORE·INSCRIBED·

BY·THE·AVTHOR·STEPHEN·RIOV.

WHO·VISITING·ATHENS·

IN·THE·TIME·OF·THOSE·RESEARCHES·

WAS·AT·ONCE·AN·EYE·WITNESS·

OF·THE·DILIGENCE·AND·ACCVRACY·

OF·HIS·INVESTIGATIONS·

AND·A·SPECTATOR·

OF·THE·SVRPASSING·ELEGANCE·AND·BEAVTY·

OF·THE·BVILDINGS·

WHICH·ONCE·ADORNED·THAT·CELEBRATED·CITY·

THE SUBSCRIBERS

TO THE GRECIAN ORDERS

OF ARCHITECTVRE.

His Royal Highneſs the Duke of **YORK.**

A

Sir Anthony Abdy, Bart.
Lady Abdy,
Thomas Anſon, Eſq;
Thomas Aſtle, Eſq;
David Andrè, Eſq;
Anthony Andrè, Eſq;
Mr. William Adair
Mr. Joſeph Anderſon
Mr. Robert Archer
Mr. William Allen

B

Duke of Buccleugh
Earl of Bute
Earl of Beſborough
Hon. Mr. Beresford
M. General Ralph Burton
Richard Berenger, Eſq;
Thomas Barrett, Eſq;
Rev. Mr. Benſon, Prebendary of Canterbury
Rev. Mr. Beauvoir, A. M.
Rev. Mr. Byrch, A. M.
Lyde Browne, Eſq;
William Baker, Eſq;
Mr. Richard Baker
Herman Berens, Eſq;
Joſeph Berens, Eſq;
John Berens, Eſq;
Thomas Brand, Eſq; of the Hoo
Mr. George Brown, Merchant
John Boyde, Eſq;
Mr. Robert Baldwin
Mr. John Baldwin
Thomas B. Bayley of Hope, Eſq;
Levet Blackborne, Eſq;
Rev. Mr. R. Drake Brockman, B. D. of Beachborough

C

His Grace the Arch-Biſhop of Canterbury
Right Hon. Lord Camden, Lord High Chancellor of Great Britain
Lord Biſhop of Carliſle
Lord Clare
Hon. Mr. Cadogan
William Crowle, Eſq; 2 ſets
Charles Crowle, Eſq; 2 ſets
Capt. Crowle
C. N. Cole, Eſq; Inner Temple
Richard Cumberland, Eſq;
Daniel Creſpin, Eſq;
Robert Clayton, Eſq;
Thomas Croft, Eſq;
Chriſtopher Croft, Eſq;

SUBSCRIBERS NAMES.

Mr. Channing, Eſſex Street
John Cornwall, Eſq;
Robert Colebrooke, of Chilham Caſtle, Eſq;
Lewis Chauvet, Eſq;

D

Duke of Devonſhire
Earl of Dartmouth
Lord Le Deſpenſer
Lord Dacre
Rev. Dr. Durell, Prebendary of Canterbury
Vice Chancellor of the V. of Oxford.
Dr. Ducarel
Charles Dunbar, Eſq;
Charles Dering, Eſq;
Thomas Dummer, Eſq;
Jeremiah Dyſon, Eſq;
Mr. John Davenport
George Dawſon, Eſq;
George Dalton, Eſq;
William Deedes, Eſq;
Iſaac Delamare, jun. Eſq;

E

Lieut. General George A. Elliot
Mr. Charles Evans

F

[illegible] Admiral Forbes
[illegible] Fitzherbert, Eſq;
[illegible]ert Fletcher, Knt.
[illegible] Fletcher, Eſq;
James Foſter, Eſq;
Coulſon Fellowes, Eſq;
Rev. Mr. John Fountain, of Marybone, A. M.
Rev. Mr. Bryan Fauſſett
Rev. Mr. Frampton, Fellow of St. John's College, Cambridge
Robert Freind, Eſq; Inner Temple.

G

Marquis of Granby
Lord Groſvenor, 2 ſets
Lord Gormanſton
His Excellency Sir James Gray, Bart. Knt. of the Bath, His Majeſty's Ambaſſador Extraordinary and Plenipotentiary at Madrid.
M. General Gray
William Gardiner, Eſq; of Richmond
John Grimſton, Eſq;
Ignatius Geoghegan, Eſq;
Edward Greathed, Eſq;
David Garrick, Eſq;
Andrew Girardot, jun. Eſq;
Peter Gauſſen, Eſq;
Henry Guinand, Eſq;
Mr. Gordon, Cabinet-maker

H

Francis Earl of Huntingdon, 4 ſets
Earl of Holderneſſe
Earl of Hilſborough
Capt. Haſtings
Sir Edward Hales, Bart.
Sir Robert Hildyard, Bart.
Sir Edward Hulſe, Bart.
Rev. Dr. Head, Arch-Deacon of Canterbury
Rev. Mr. Heaton, Prebendary of Ely
John Hemington, Eſq;
D'arcy Hildyard, Eſq;
Richard Hulſe, Eſq;
William Hervey, Eſq;
John Howe, Eſq;
Mr. Highmore, Canterbury
Henry Hoghton, of Caſtle Hedingham, Eſq;
Mr. John Hardham
Thomas Orby Hunter, Eſq;
Mr. Hope
William Hanbury, Eſq;
Rev. Mr. William Hirſt, A. M. F. R. S. 4 ſets.
Mrs. Mary Halpen

I

Rev. Mr. Edward Jackſon
Soame Jenyns, Eſq;
Mr. J. Elias Jaquery, Merchant

K

Mathew Knapp, Eſq; High Sheriff for the County of Bucks
Thomas Knight, Eſq;
Charles Keightley, Eſq;

L

Colonel St. Leger
Luke Lillingſton, Eſq;
John Lidgbird, Eſq,
Richard Long, Eſq;
William Locke, Eſq;

SUBSCRIBERS NAMES.

William Lynch, of Groves, Esq;
Robert Lynch, M. D. Canterbury
Rev. Dr. Lynch, L. L. D.
Rev. Mr. George Lynch
Mr. William Loftie, Canterbury
Mr. William Loftie, jun.
Mr. Lucas
Mr. Thomas Lewis
Mr. Lewis, Carpenter

M

Earl of Mexborough, 2 sets
Earl of Moira, 2 sets
Lord Robert Manners
Lady R. Manners
Lord James Manners
Lord Montfort
Sir Joseph Mawbey, Bart.
Major Osbert Mordaunt
Rev. Mr. W. Mason, Præcentor and Residentiary of York
John Maseres, Esq;
Mr. Moore, Statuary, Berners St. Oxford Road
Mr. Thomas Major, Engraver
Mr. James Meaden, Builder
Mr. John Millan
Mr. Richard Morgan

N

Duke of Northumberland
Richard Neville Neville, Esq;
John Luke Nicolls, Esq;
Peter Noailles, Esq;
Mr. William Newton, Architect, Hatton-Garden
Mr. Richard Norris, Builder
Mr. Philip Norris

O

Robert Orme, Esq;
Chaloner Ogle, Esq;
Henry Oxenden, Esq;

P

Earl of Pembroke
Lord Pigot
Sir James Porter, Knt. F. R. S.
John Pitt, Esq;
The Rev. Dr. Potter, Dean of Canterbury
John Pownall, Esq;
Thomas Pownall, Esq;
Robert Pratt, Esq;
Thomas Pitt, of Boconnock, Cornwall, Esq;
——— Porter, Esq; at Canterbury
Charles Pool, Esq; Hull
Charles Fish Palmer, Esq; 2 sets
Thomas Plumer, Esq;
Francis Plumer, Esq;
Mr. Charles Parker
Mr. Pars, Drawing-master
Mr. John Payce

Q

George Quarme, Esq;

R

Marquis of Rockingham
His Excellency the Earl of Rochford, his Majesty's Ambassador Extraordinary and Plenipotentiary at Paris, 2 sets
Rev. Mr. A. Robinson, Vicar of Hull
Mrs. Katherine Read
Hon. Thomas Robinson
George Rice, Esq;
John Roberts, Esq;
——— Ram, Esq;
Mr. Joseph Rose, Plaisterer
Mr. Henry Russell

S

Earl Spencer
Countess Spencer
Sir Charles Saunders, Knt. of the Bath
M. General Skinner
Philip Stephens, Esq;
Tyringham Stephens, Esq;
Rev. Dr. Sutton, Prebendary of Canterbury
John Smith, Esq; of Sydling, Dorset
Rev. Mr. Hervey Spragg
John Sargent, Esq;
Henry Stevenson, Esq;
Mr. Robert Strange, Engraver
James Stuart, Esq; F. R. S. F. S. A. Painter and Architect
John Simons, Esq; Bury St. Edm.
Mr. Scott, Carpenter
Mr. Daniel Sleeford
Mr. John Smith
Mr. George Stubbs, Painter

T

His Excellency Lord Viscount Townshend, Lord Lieutenant of Ireland
John Thornton, Esq;
Charles Turner, Esq;
Thomas Towers, Esq;

V

Agmondesham Vezey, Esq;
John Vppleby, Esq;
George Vppleby, Esq;
Anthony Villion, Esq;
Mr. Francis Villion.

SUBSCRIBERS NAMES.

W

Lady Charlotte Wentworth
Lord Walpole
Hon. Mr. Thomas Walpole
Sir Cecil Wray, Bart.
William Whitaker, Esq; H. M. Pr. Serjeant
Edward Willes, Esq; H. M. Sollicitor General
Thomas Worsley, Esq;
John Walsh, Esq;
Rev. Dr. Walwyn, Prebendary of Canterbury
Mathew Wylebore, Esq; at Peterborough
William Weddell, Esq;
Richard Wynne, Esq;
John Wightwick, Esq;
William Wilberforce, Esq;
Robert Wilberforce, Esq;
William Wilson, Esq;
George Wilson, Esq;
Daniel Wilson, Esq;
Thomas Wynne, Esq; Grosvenor Square
Mr. Willmott, Plaisterer
Mr. William Winchester.

Y

William Young, Esq;

Z

Mr. Zuccarelli.

PUBLICK LIBRARIES.

Corp. Chr. Coll. } Cambridge.
Jesus Coll. }
St. John's Coll. }
Library C. C. Canterbury.

FOREIGN SUBSCRIBERS.

LONDON.

S. E. Le Comte de Welderen, Envoyè de L. H. H. P. P. les Etats Gen.

MADRID.

Le Comte Gazzolo, General d'Artillerie, &c.

PARIS.

Monsr. Soufflot, Chevalier de St. Michel, Control. des Bat. du Roi. a Paris, M. de L'A. R. d'Archit.
Monsr. Le Roy, Historiogr. de L'A. R. d'Archit.
Monsr. Moreau, Archit. de la Ville, M. de L'A. R. d'Archit.
Monsr. Guillaumot, Archit. de l'Intend. & Inspect. Gen. des eazernes
Monsr. De Saint, Libraire, 4 ex.

ROME.

Monsr. L Abbè Grant.

ANTWERP.

Monsr. Francois Mols.

GENEVA.

La Bibliotheque Publique.

HAGUE.

Monsr. De Lage, Col. du Corps des Mineurs & Intendant des Batimens de S. A. S. le Prince d'Orange, & de Nassau, 2 exemp.
Monsr. De Swart, Architecte de S. A. S. le Prince d'Orange & de Nassau, 2 exemp.
Monsr. Henri Fagel Secretaire, de L. H. H. P. P. les Etats Generaux des Provinces Unies.
Monsr. Nicolas Ten Hove, Ecuïer
Rev. Mr. A. Maclaine, Minister of the English Church
Monsr. Vander Heim, Bourgue Maitre de la Ville de Rotterdam, & Secret. de l'Amirautè
Monsr. A. Schouman, Peintre, pour l'Ecole fondèe par Madame Renswoude a la Haye.

MIDDELBURG.

Monsr. Van Citters, Repres. le premier Noble de la Zelande
Monsr. Johan Adriaen Van de Perre Seign, de Nieuwerve & de Welsingen
Monsr. Johan Pieter Van den Brande, Chev. Baronet Seign. de Gapinge
Monsr. Johan Steengracht.
Monsr. J. F. Laentsheer, F. R. S.
Monsr. E. Phli. Van Visvliet, M. D.
Monsr. Wilhelm Schorer, Conseill. de L'Amirauté
Monsr. A. Van de Putte Schorer
Monsr. Dan. Radermacher
Monsr. Paul Ribaut
Monsr. Paul Hurgronje
Monsr. Vanden Helm Boddaerd
Monsr. Pieter Pyl
Monsr. Chr. Bohemer, Libraire, 2 ex.
Monsr. Leenderd Bomme.

CUYLEMBERG.

Monsr. Perenot, Bourgue-Maitre.

ERRATA.

Preface, last Page; dele comma after *coepit*. Page 40, for *Me renidet*, read *Mea renidet*. Page 51, last Line, for *personibus*, read *personis*: fourth line from the bottom, for *urbanus*, read *urbanas*.



PREFACE.

ALTHO' the ſkill and diligence of ſo many ingenious men, for above theſe two laſt centuries, have been excited to retrieve the architecture of the antients, and reſtore it in its original purity and beauty, neither they who had formed precepts for this purpoſe from the writings of Vitruvius, nor others who endeavoured at the reſtoration of the Greek orders, from the ruined edifices of Rome, have ſucceeded completely in their laudable attempts; no original traces of the Doric and Ionic orders could fall under their moſt diligent reſearches; they found no examples of theſe but ſuch as were very defective: it was not then known that the Grecians had left ſome venerable Doric monuments at Poeſtum, near Salerno, in the kingdom of Naples; this ſeems a very late diſcovery: the abbé WINKELMAN, whoſe penetration into the ſtores of antiquity, nothing can eſcape, ſuppoſes them the moſt antient of any Grecian remains, and informs us that he is the firſt who mentioned them to the publick. Athens all this time may be ſaid to have been forgotten: ſuch few travellers who ventured to viſit Greece, whatever ſucceſs they had in their purſuits after other objects of antiquity, it ſeems were not furniſhed with the requiſite ſkill in architecture, to bring away with them, either by an exact technical deſcription, or correct drawings, ſuch accounts and repreſentations of Grecian buildings, as could prove ſatisfactory to the diſcernment and inquiry of the curious.

This very deſirable taſk was reſerved for the united labours of M. M. STVART and REVETT; to them we owe that excellent book, *The Antiquities of Athens*, a work executed with veracity, erudition and elegance, and which with the very circumſtantial and true delineations of Athenian remains, will tranſmit to poſterity the authentic records and perfect models of the Grecian orders.

From thoſe antiquities, it is attempted in this treatiſe to eſtabliſh documents for the three orders, and to make a modulary diviſion of all their component parts for practical uſes; what little differences may be obſerved, were only admitted to avoid fractions in their progreſſional altitudes, which are fixed at ſo many entire diameters; the character of every member in each order is ſtrictly preſerved, becauſe otherwiſe the ſpecific diſtinctions in the three different modes, would be confounded and out of place.

While we are modulating the orders from unqueſtionable originals, it would be an unpardonable ſlight to the only writer of antiquity upon this ſubject, whom time and accidents have not deſtroyed, if we did not introduce him: Vitruvius is too reſpectable an author not to be quoted in a work of this nature, and though a Roman, he has ſaid all that was poſſible in favour of Grecian architecture; and has delivered, with the neceſſary rules, its origin and progreſs: It muſt be owned, that his expreſſions are ſometimes low and bald, but it was unavoidable in the dry parts which regard only meaſurements, and the mere mechanical directions; for in his prefaces and hiſtorical narratives, and in many ſcientific matters, diſperſed throughout his works, the ſtyle is much more correct and florid. In his preface to his VII book he has named the Greek and Latin writers upon architecture, which may have ſerved him in the compilation of his treatiſe. Pliny quotes him in his XVI, XXXV and XXXVI books of his natural hiſtory, and generally throughout theſe volumes are extracts from Vitruvius, even in his own words. Whatever want of

method

method and obſcurity may appear in ſome of his writings are entirely to be attributed to the copyiſts; for it cannot be ſuppoſed that the diviſions of his writings were made by himſelf, in the irregular manner they have appeared unto us. All his editors have lamented the blots, miſtakes and errors, they have had to contend with: in the extracts we have cited, we have made the tranſpoſitions ſuitable to the regular courſe neceſſary to be obſerved in deſcribing the orders.

We have made uſe of De Laet's edition, *cum notis Philandri, Amſt.* 1649, for the quotations we have given; and whenever we have met with any doubts about the numeral characters, we have taken the liberty to alter them as other commentators have done, for the extents of the tetraſtyle, hexaſtyle, Doric fronts, the heights of the Doric and Ionic entire columns, the Ionic capital and baſe, &c. For our juſtification we can ſay, that we have only hazarded to rectify theſe modulary diviſions from the edifices themſelves, which Vitruvius would have acknowledged of prior and more certain authority: and the eſſential and characteriſtick members in each order, as we have traced them, will be found conformable to his written preſcriptions.

The words of Grecian origin, can never admit of being tranſlated, ſuch as peripteral, proſtyle, pycnoſtyle, &c. and *muſt be adopted as invariable proper names, like column, capital,* cyma and others, heretofore uſed by modern authors.

It may be acceptable to many of our readers, to lay before them the ſeveral M. S. S. copies and Latin editions of Vitruvius, and the tranſlations from the ſame author, into ſome of the modern languages.

There are ſeveral manuſcripts in the Vatican; two of theſe are prefered above all the others for their antiquity and correctneſs, one marked No. 1504, the other No. 2079, both of the Alexandrine library. They were recommended to the Marquis GALIANI, by M. M. ASSEMANNI and BOTTARI, who were the keepers of that valuable collection: the Marquis only confronted the above two M. S. S. tho' he confeſſes it might have been better to have compared them all, had he not been ſtraitened for time.

In the *Catalogi Librorum, M. S. S. Angliæ & Hiberniæ in unum collecti. Oxoniæ* MDCXCVII. the following manuſcripts of Vitruvius are ſet down.

I. *Lib. M. S. S. Coll. S. Joannis. B. Oxoniæ.*	*No.* 94 *Vitruvius de architectura.*
II. ——————*Coll. Eton.*	*No.* 125 *Idem fol.*
III. *Cod. Lat. Is. Voſsii Can. Windeſor.*	*No.* 83 *Idem & No.* 95 *idem.*
V. *Lib. Lat. cum M. S. S. Collati Ejuſdem.*	*No.* 20 *Vitruvius Philandri.*
VI. *Biblioth. Norfolc. in Coll. Greſh. Londini.*	*No.* 121 *Vitruvii libri architectura, libri* 12.
VII. *Lib. M. S. S. Ed. Langley Eq. Comit Salop.*	*No.* 49 *Vitruvius de architectura, fol.*
VIII. ——————*Edwardi Bernardi.*	*No.* 195 *Vitruvii.*
IX. *Biblioth. Jacobææ.*	*No.* 896 *Excerpta ex Vitruvio.*
X. *Biblioth. Cottonianæ. Cleopatra.*	D. I. *Vitruvii de architectura, Lib. X. &c.*

At the end. *Julius Solinus explicit feliciter ſtudio & diligentia domini Theodoſi invictiſſimi principis. This M. S. S.* is ſaid to be very correct, and written in a very antient hand; at preſent this book ſhould be in the Britiſh Muſeum.

Ten ſeveral Latin impreſſions are reckoned.

I. One of Sulpitius about the year 1486.

II. One at Florence, 1496.

III. One at Venice, 1497.

IV. One by Jocondus at Venice, 1511.

V. One corrected by the ſame in Florence, in 1513. Another edition by the ſame, in 1522. And a third in 1523.

VI. One at Straſburgh, in 1543. And a ſecond in 1550.

VII. One by Gul. Philander at Lions, in 1552. And again at Geneva, in 1586.

VIII. One by Daniel Barbaro at Venice, in 1567.

IX. One by Johannes de Laet at Amſterdam, in 1649.

X. One by the Marquis Galiani in oppoſite pages to the Italian tranſlation, at Naples, in 1758.

The Tranſlations of this author are,

I. One French, by Jean Martin, Paris 1547. The ſame again in 1572. And the ſame at Cologne in 1618.

II. One by Claude Perrault, in 1673. and with emendations, in 1684.

III. One German by D. Walters and H. Rivius, Nurembergh in 1548, the ſame at Baſil, in 1575. and again, 1614.

IV. One in Spaniſh, not of the entire work, but a compendium, by Don Didaco Sagreda, entitled, *Medidas del Romano, ò Vitruvio.* in *Madrid,* 1542. and in *Toledo,* 1549. and again in 1564.

V. One in Italian by Ceſariani at Como, 1521.

VI. One by Durantino at Venice, in 1524. again 1535.

VII. One by Daniel Barbaro at Venice, in 1556. again 1567. and for the third time in 1629.

VIII. One by Caporali, in Perugia in 1536.

IX. One by the Marquis Galiani, in oppoſite pages with the Latin, Naples, 1758.

In the *Acta Erudit. Lipſiæ* 1731. an Engliſh tranſlation by Robert Caſtel, was promiſed, but it has not yet appeared.

Many are ſuppoſed to be the M. S. tranſlations in different parts of Italy, two are mentioned at Rome, one in the Ottobonian collection, No. 1653, the other in the Corſini library, ſuppoſed to be done by Sangallo.

The French tranſlation by Perrault, above all others, deſerves ſingular eſteem, his notes are judicious, and the verſion is clear.

The Marquis Poleni in his *exercitationes Vitruvianæ*, has given the various readings of ſeveral commentators: an edition of Vitruvius, from this noble author has long been expected.

To the Grecian orders, the parallels of the orders of PALLADIO, SCAMOZZI and VIGNOLA, are ſubjoined, being thoſe of the reſtorers, who on account of their ſuperiority in their choice and in deſigning the profiles and members, were judged the moſt proper to ſelect out of the ten noticed in *parallele de l'Architecture ancienne & de la moderne, &c. par* M. DE CHAMERAY. The orders of the three Italian authors are examined and compared one with the others: this addition will furniſh a ſufficient variety to the lovers of architecture, and may be of ſervice to them in their compariſons of the pure Grecian, and the orders reſtored from the ruins at Rome: and herein the following obſervation of M. de Chambray is worthy of particular notice; "That it "is a viſible abuſe in the architecture of the moderns, to have confounded the Grecian orders "among the Latin, and the general inadvertency of ſo many authors is really to be wondered at, "who, writing of their ſymmetries, and of the detail of their proportions, have diſpoſed them in "ſuch a manner, as plainly diſcovers how ignorant they were of their proprieties and ſpecific dif-"ferences; without which it is very difficult to make uſe of them judiciouſly; M. EVELYN "tranſlated M. de Chambray's work, and it cannot be too ſtrongly recommended to thoſe who do "not underſtand the original."

The late delineations for two of the orders, from original models, to which the above-named authors, and others ſince, were entire ſtrangers, furniſh us with ſuperior advantages; too ſervile an imitation might be deemed inconſiſtent with the licences allowable in art; but this is the teſt.

Qui variare cupit rem prodigialiter unam,
Delphinum ſylvis appingit, fluctibus aprum.

HOR. Ars. p.

It is well known that the Grecian antiquities are in the ſame ſtate as the Roman; the greateſt part have been deſtroyed, and of ſome, in a few years not a *wreck* will be left to inform us of the ſpots where they once were ſituated; there ſtill remain magnificent veſtiges of the three orders, and ſome of theſe, of edifices raiſed in the time of Pericles. M. LE ROY, very pertinently propoſes, as the moſt eligible method in theſe matters, to look upon the antiquities of Greece, thoſe in Aſia Minor, and in Syria, as well as thoſe at Rome, the precepts of Vitruvius, and ſentiments of the beſt modern architects, as altogether contributing the neceſſary data for the elements which may ſerve to produce the beſt poſſible (a) orders; for by a multiplicity of compariſons, but with few and ſimple principles, a greater number of determinate ideas will ariſe in the mind, and there is all the reaſon to believe, that the reſtorers of architecture in Italy, would have left us their labours more perfected, if they could have beheld Rome in the reign of Hadrian, Athens in the days of Pericles, or even the remains of Greece, as they were in their times, or as they are at preſent, opening a vaſt field to the reflections of the curious.

This method of collecting (continues the laſt named author) and of reconciling the differences of examples, and of opinions, ſeems that which would moſt effectually tend to eſtabliſh the principles of architecture, hitherto but vaguely received in all civilized nations, yet are immediately

(a) From what this author has alledged in a preceding paragraph of his *Diſcours ſur la nature des principes de l'architecture civile*, we preſume he can only mean to make that choice from among the Grecian orders of different times and places, for he ſays, *toutes les diſpoſitions qui tiennent de cette origine ſont agreables, celles qui s'en eloignent ſont bizarres.* The problem might therefore ſtand thus.

"The neceſſary relative ſolidity, and the ſpecific members, of any one of the Grecian orders being given, to deſcribe the beſt poſſible form thereof." Upon the ſolution of this problem depend, as we ſhall have occaſion to obſerve, the ſtrength and beauty of buildings with or without columns, of one or of ſeveral ſtories, ever ſo plain or ornamented, and of whatever materials; and we likewiſe ſhall find that the true relations between the three different ſtyles in building, the ſtrong, the mean, and the delicate, are eſtabliſhed upon an exact knowledge of the orders.

diately and ſtrictly united with the other ſyſtems of Grecian art and ſcience; *calamo ligantur eodem.* It is only pardonable in thoſe who are ignorant of the manifold reſearches architecture requires, to look upon the orders of Vignola, or of others as perfect, without giving themſelves the trouble to examine whence they were taken, or whether they have made a good choice of the different parts which compoſe them? it would be perhaps moſt uſeful for the advancement of architecture, that the ſkilful architects in every country ſhould renew their endeavours to reſtore the orders: their eſſays would do honour to the times, and would be tranſmitted to poſterity with applauſe.

Several able artificers have conſidered the antiquities of Athens, as mere *innovations*; there is no doubt but that after ſome inquiry and reflection, they will part with their prejudices; eſpecially if they have an opportunity of working after ſome well choſen deſigns; for the great neatneſs and truth with which the workmen of Great Britain and Ireland, above all others, execute their ſeveral branches, can never fail of doing juſtice to the moſt elegant patterns; this praiſe is due to theſe worthy members of the community, for who are more ſo than thoſe men, who by their daily labour maintain themſelves and families, leading an induſtrious, ſober and quiet life; yet that vanity deſerves ſome ſort of cenſure, which ſo frequently puffs up a ſtonemaſon, a bricklayer or a carpenter to write themſelves *Architects*; The beſt hands in all theſe trades have a tolerable knack in drawing the parts and members of the orders, but are generally very unhappy in the whimſical application of them: ſome have ventured to plan buildings; Now as often as this has happened, little has ever been ſaid in favour of their invention or taſte; moſt commonly they are only the leſs guilty accomplices with the prudent perſons who employ them, and who, whatever may be their notions of beauty, have certainly an undoubted right over their *builders* and *buildings*, and therefore in juſtice muſt bear a ſhare of the blame.

Amphora coepit,
Inſtitui currente rotâ cur urceus exit?

The arts which the profeſſed architect ſhould have knowledge of, are in themſelves ſcientific, and of great ſcope; how are theſe attainable, but by a very liberal education? and then not without the requiſite taſte to imbibe them, *nec ſtudium ſine divite venâ*; things being ſo, each mechanic (a rare genius excepted) ſhould content himſelf with being the complete maſter of his own branch; therein he may acquire great fame, by any real improvement in his practice, that experience or chance may offer, without aiming at thoſe deſigns, which require in their whole and in each of their parts, a more general knowledge, than ever he had leiſure, opportunity, or perhaps capacity to comprehend. Is it not then reaſonable to infer, that the ſucceſs of every ſtructure muſt always depend upon the reciprocal aſſiſtance of the artiſt, and of the artificers?

——*Alterius ſic*
Altera poſcit opem res & conjurat amicè.

Having finiſhed what relates to the delineation and explanation of the orders, we paſs on to ſome general remarks, and curſory practical conſiderations concerning publick and private edifices, and to give a deſcription of ten plans with their elevations, which concludes the volume. And as in the introduction to the orders, we have given ſome ſhort notices of the moſt celebrated reſtorers of architecture in Italy, it was judged not altogether improper to collect ſome brief accounts of eminent Britiſh architects; we have tranſcribed what is ſufficient for our purpoſes, partly from that valuable work *Biographia Britannica*; to theſe volumes we refer our readers for many entertaining particulars, which we omit, relating to our architects and to the hiſtory of their times: The tranſcriber hopes not to have given offence by the addition he has taken the liberty to make of ſome right honourable names: it is a double advantage for the arts to have their protectors of the higheſt ranks, endued with equal degrees of knowledge and benevolence in promoting their advancement; what efforts then will they not make? when, beſides the patronage of our firſt nobility, they are known to partake in the ROYAL AUSPICES OF A MOST GRACIOUS SOVEREIGN, THE FATHER OF HIS COUNTRY.

Seven ornamental plates, for head and tail-pieces, are interſperſed throughout theſe ſheets: with reſpect to the laſt ten architectural plates, if the buildings had been traced from larger ſcales, and finiſhed in a higher manner, it would have conſiderably advanced the price, without an adequate advantage to the intelligent readers; wherever any thing may appear doubtful in the ſmaller members, it can eaſily be decided by referring to the parts at large in the preceding orders.

CANTERBURY, XXX. NOVEMBER. MDCCLXVII.

AN EXPLANATION

OF THE

SEVERAL ORNAMENTAL PLATES.

MOST of theſe explanations are trite, and commonly known, yet as they cannot be ſaid to be miſplaced, we have ventured to give them.

Amphion buildeth the walls and towers of Thebes, by the ſound of his lyre, accompanied with his voice.

Dictus & Amphion Thebanæ conditor arcis
Saxa movere, ſono Teſtudinis & precé blandâ
Ducere quo vellet.

HOR. ARS. POET.

It is feigned that Amphion being the firſt who raiſed an altar to Mercury, the god as a reward for his zeal, made him a preſent of a lyre, and taught him that wonderful manner of playing and ſinging, which produced ſuch enchanting effects. Mercury having found the ſhell of a tortoiſe, and fitting ſtrings to it, is called the parent of the lyre

Curvæque lyræ parentem.

And from the circumſtance juſt related, *Teſtudo* ſignified a lyre.

But diveſting this ſtory of its poetical fiction, we are given to underſtand, that Amphion was a prince, who by his ſoothing perſuaſions, induced a barbarous and unpoliſhed people, to build themſelves a city, and ſurround it with walls, to receive and obey laws. According to Pauſanias, Amphion and Zethus, having conquered Lycus, whom they killed, and taken poſſeſſion of his kingdom, they joined the lower town with the Cadmea, and called the whole Thebes. Amphion acquired the reputation of a great muſician, for having learned the Lydian meaſure; he was the firſt that brought it into Greece, and likewiſe added three more ſtrings to the lyre, which till then had but four.

Other traditions make Amphion and Orpheus Egyptians, (tho' the latter is called a Thracian) and that both excelled in magic, the one having the power of moving the ſtones from the very rocks, and the other that of enticing the moſt fierce and ſavage animals.

II. *At the head of the Preface.*

A view of Athens, from a ſketch taken on the road in going from that city to the Pireus, at preſent called *Porto Leone*; this port is about ſix miles from Athens. The antient ports of Munychia, and of Phalarus, (at preſent out of uſe) are upon the ſame ſhore, in bays very near each other, and to the Pireus.

This view offers a proſpect of one ſide of the city, with the Acropolis, or citadel, wherein is the Temple of Minerva Parthenion; the Temple of Theſeus is upon the lower ground, cloſe by the road which the two horſemen are ſuppoſed to have paſſed; from amidſt the houſes are ſeveral minarets or Turkiſh ſteeples. On the other ſide of the city, the pointed rocky-hill, is mount Anchesmus, now called from a little chapel at the top, *(Tou Hagioû Giorgio Vouni)* St. George's mountain; where probably in times paſt was the ſtatue of Jupiter Anchesmius. The diſtant mountain to the left, is Pentelicus, noted for its quarries of marble: the continued mountain that riſes upon the right hand, is part of Hymettus, famous even at this day for its honey.

III. *The Table of Contents.*

The promontory of Sunium; eleven leagues from the Pireus: this view was taken at ſea, in ſailing out of the Saronic Gulph, now called *Golfo di Egina*, and the promontory, *Capo Colonne*, on account of the ſeventeen columns of white marble upon its ſummit, which is ſeen afar off at ſea; they are the remains of a Doric temple dedicated to Minerva.

The

The beſt boats and boldeſt ſailors in the Archipelago are thoſe from the little iſland of Hydrea, cloſe to the coaſt of Morea; they go with oars in a calm, and have very large latine ſails.

IV. *The Introduction.*

A compoſition for a baſſo relievo, conſiſting of antique trophies, partly taken from ſome of the compartments of Ovid's tomb, and partly from the pedeſtal of the Trajan column, and from Polydore. The *Cornu-copiæ* and ſerpents are emblems of plenty and health, while the ſuſpended arms remind us of that ſecurity and protection which only can be inſured to a ſtate, by not ſuffering its martial ſpirit to be totally extinguiſhed, and its diſcipline ruined: what an eaſy prey would any country in ſuch a ſituation become, either to the ſurprizes, or the more formal attacks of treacherous and ambitious enemies? The luxury and idleneſs of peaceable times, are apt to make men ſlight the heroic virtues of their anceſtors.

The motto to this ornament is taken from Cicero's oration for Muræna. *Omnes urbanæ res, omnia hæc noſtra præclara ſtudia, & hæc forenſis laus & induſtria, latent in tutela, ac præſidio bellicæ virtutis.*

V. *At the End of the Grecian Orders.*

Pegaſus alighting upon Helicon, ſtrikes the rock with his hoof, and opens the Hippocrenean ſprings, ſacred to Apollo and the Muſes. Mention is made by Pauſanias of a temple dedicated to Minerva chalinitida; becauſe ſhe had been kind enough to ſend this winged horſe, ready bridled and thoroughly bitted, to Bellerophon, who takes him while he is drinking at the fountain Pyrene by Corinth, for his intended expedition againſt the Chimera. The Chimera, was a dreadful monſter, ſuppoſed to have the head of a Lioneſs, the tail of a Dragon, and the body of a Goat.

Mediis in partibus Ircum
Pectus & ora leæ, caudam Serpentis habebat.

Heſiod gives her the three heads of thoſe three animals, and makes her the dam of the Sphinx, and of the Nemean Lion.

This deſign is from a fine cornelian *intaglio* of the Abbate della Torre; it bears the name of Socrates for the engraver. The ſame ſubject is repreſented nearly as large as the life, in a marble baſſo-relievo at the palace Spada in Rome.

The fable of Bellerophon, like all others, has been variouſly explained; ſome ſuppoſing that by the winged horſe, was ſignified his rapid conqueſts over three nations; the one having the courage of Lions, another inhabiting a mountainous country, like Goats, and the third poſſeſſing all the wiles and cunning of Serpents. But others have imagined the Chimera to have been a ſhip belonging to a famous pirate, whom Bellerophon defeated, and that Bellerophon's veſſel was ornamented with a winged horſe, or was named Pegaſus, from the ſwiftneſs of its ſailing.

To return to the fable. The preſumption of Bellerophon in attempting to fly up to heaven upon his winged ſteed, was puniſhed by his being caſt down on a plain in Cilicia, where he was left deſtitute and blind to ſpin out a long and miſerable life: Jupiter prepared him this puniſhment, by ſending a fly to ſting Pegaſus in his aerial flight. The moral is, that the moſt uninterrupted proſperity, ſhould never make one engage in a raſh enterpriſe, which generally ends in entire ruin.

VI. *Remarks concerning publick and private Edifices.*

This compoſition is for an ornament in alto relievo; it repreſents the two eagles as placed at the baſe of the Trajan column; between them, upon a Doric tablet, is the face of the Apollo Belvedere; this ſtatue will ever be eſteemed one of the rare wonders of art; it is an intellectual image, and the artiſt has taken no more of matter, than what was neceſſary to render his idea viſible;

ble; we are ſpeaking of the original ſtatue, and deſcribing it after Winkelman; let the mind raiſe itſelf in contemplating this figure, up to the ſphere of celeſtial beauties, and make its utmoſt efforts to gaze upon the tranſcendent charms of a heavenly body. The ſon of Jupiter is here repreſented worthy of his father; ſuch was the forehead of the thunderer, when pregnant with the goddeſs of wiſdom, and ſuch were his brows arched over his radiant eyes, which by their motion expreſs his will; the mouth is the voluptuous mouth of Bacchus; his ſilken treſſes perfumed with aromatic ſcents are ſoftly blown by the breath of Zephirs, and float like the tendrils of the unpruned vine, but thoſe locks above his front, are tied in majeſtic pomp by the hands of the Graces. Such was his countenance when he purſued the Python, whom he pierced with a thouſand arrows. On this account the Pythian games were inſtituted, and celebrated near Delphi; the place that for the oracles challenged the pre-eminence, as well for its antiquity (wherein it contended even with Dodona) as for the truth and perſpicuity of its anſwers, the magnificence of its ſtructures, the number and richneſs of the ſacred preſents. Apollo himſelf was the author of theſe games, according to the moſt common opinion.

Neve operis famam poſſet delere vetuſtas
Inſtituit ſacros celebri certamine ludos,
Pythia perdomitæ ſerpentis nomine dictos.

OVID. Metam. Lib. I.

The arrows of Apollo are figurative of the rays of the ſun, which exhale and diſſipate the noxious and putrid vapours of the earth ariſing from ſtagnated waters in marſhy and ſwampy lands; but as this heathen deity is alſo deemed the god of phyſic, by the python may be underſtood that legion of diſtempers to which animal bodies are expoſed, which find their cure in thoſe plants and herbs endued with ſalutiferous virtues from the genial warmth of the ſun.

There were to be ſeen in the temple of Delphi, the figures of two eagles, in memory of the eagles ſent forth by Jupiter, one from the Eaſt and the other from the Weſt, to diſcover the middle ſpot (the navel) of the earth, and they meeting in this place determined the queſtion.

Eagles in their flight are ſaid to be able to look ſteadfaſtly upon the ſun; certainly they are the kings of the feathered tribe, and as ſuch are repreſented to carry the thunderbolts of Jupiter; when he ſeized upon Ganymede, he diſdained the ſhape of any other bird.

——————Nulla tamen alite verti
Dignatur; niſi quæ poſſit ſua fulmina ferre.

OVID. Metam. Lib. X.

The dignity of the eagle, even in his ſleep, is finely expreſſed in the following lines.

Perching on the ſcepter'd hand,
Of Jove, thy magic lulls the feather'd king,
With ruffled plumes and flagging wing;
Quench'd in dark clouds of ſlumber lie
The terror of his beak, and light'nings of his eye.

GRAY'S ODE.

VII. *At the end of the book.*

Mercury ſeated on a ram, with his caduceus and purſe; as in the primitive ſtate of nations, riches conſiſted in flocks and herds, Mercury is repreſented with a ram, being thought to take them under his protection, and likewiſe to occaſion their increaſe; the firſt money among the Romans was called *pecunia*, from *pecu* a flock, becauſe Servius Tullius had it ſtamped with the figure of a ram.

The caduceus, or wand, is taken for an emblem of eloquence, and of that power in oratory which allures or drives the minds of men to the purpoſes it has in view. This wand however is the proper

proper enſign of the meſſenger of the gods, he carries it with him in his attendance upon the ſouls of the deceaſed, to the realms of Pluto.

Tum Virgam capit, hac animas ille evocat orco
Pallenteis, alias ſub triſtia tartara mittit,
Dat ſomnos, adimitque, & lumina morte reſignat. ÆN. IV.

Upon which account he was prayed to: Ajax in Sophocles, before he ſtabbed himſelf, thus addreſſes him.

——Infernal Mercury I call,
Safe to conduct me to the ſhades below.

He alſo preſided over ſleep and dreams. As to the purſe, it ſeems a ſtolen one; this may give a beneficial hint to the careleſs part of mankind, by teaching them a proper vigilance in the care of their goods.

Callidum quidquid placuit jocoſo
condere furto. HOR. Lib. I. Od. 10.

In the markets, Mercury was called Hermes Agoraios; and from the cheats and frauds ſo commonly practiſed in dealings, became the god of thieves; in this office, having too much buſineſs, he was aſſiſted by a goddeſs called Laverna, to whom prayers were addreſſed for ſucceſs in thieving and cheating.

——*Pulchra Lavernà,*
Da mihi fallere da juſto ſanctoque videri
Noctem peccatis, & fraudibus objice nubem.

Perhaps ſome may ſhrewdly ſuſpect, that ſince the poet wrote, the goddeſs has encouraged her votaries to cheat in broad day, and with manifeſt impudence.

In the Metamorphoſes, we read of a ſon of Mercury, whom ſome of the commentators ſuppoſe to have riſen to very eminent buſineſs in a certain profeſſion, from an ingenuity natural to him in pleading, *of making black white, and white black.*

Naicitur Autolychus, furtum ingenioſus ad omne
Qui facere aſſuêrat, patriæ non degener artis
Candida de nigris & de candentibus atra.
OVID. METAM. Lib. XI.

Mercury is ſometimes taken for the ſun, and then by the ram he is repreſented in that portion of the ecliptick, called Aries. From Pauſanias, we learn that the ram likewiſe alludes to the myſteries of the Eleuſinian games. When Mercury is ſtiled Criophorus, or the ram-bearer, it is relative to a ſolemnity obſerved by the Tanagreans in Bœotia, in commemoration of their being delivered from the plague, by the god carrying a ram upon his ſhoulders, and walking with it round the city; upon this feſtival, therefore it was cuſtomary for one of the moſt beautiful youths to walk round the walls, with a lamb or ram upon his ſhoulders.

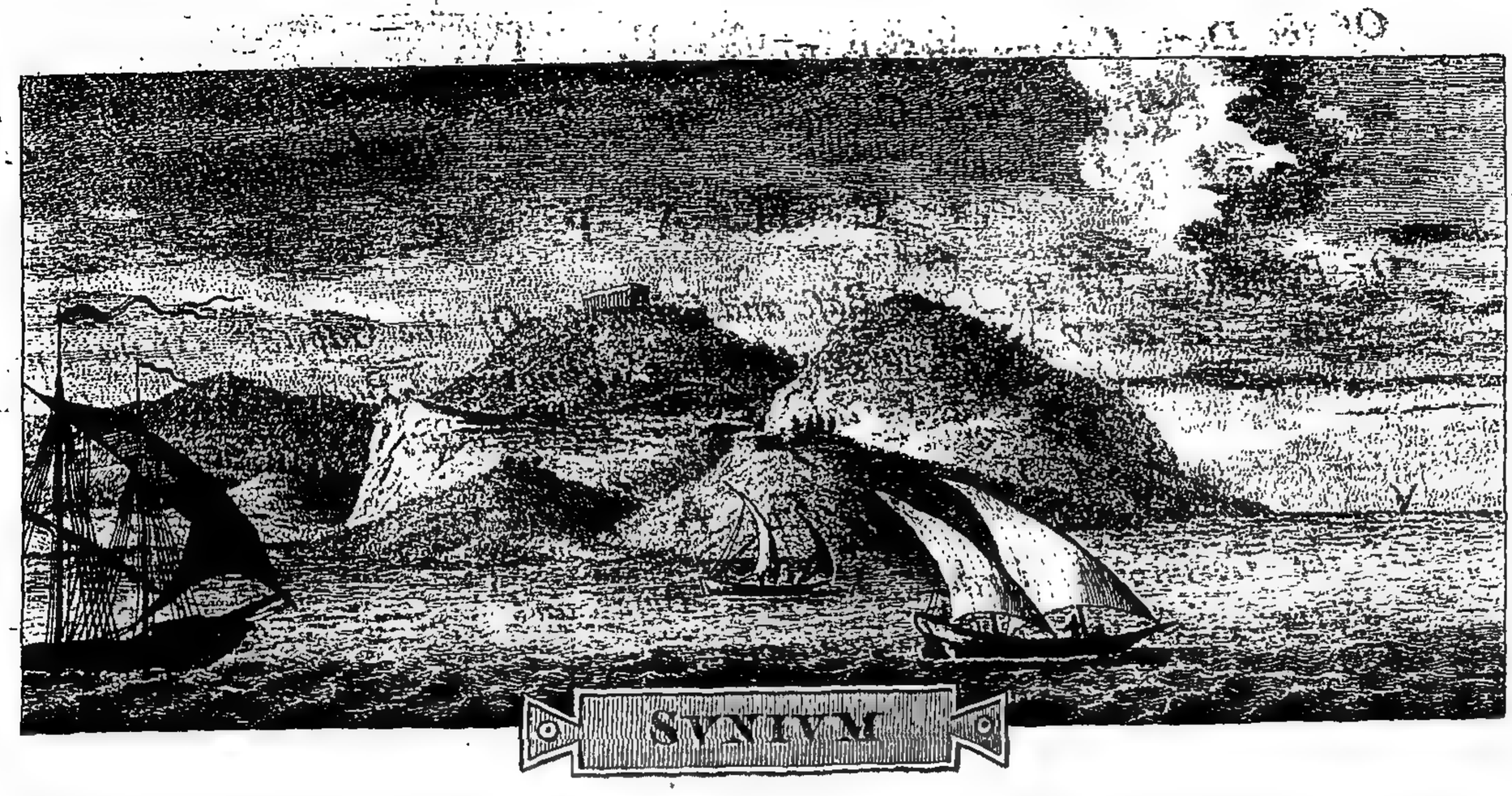
The Cornelian from which this deſign is taken, is mentioned by *Leo Agoſtini, gemme antiche.*

They who are fond of expatiating upon theſe fancies of antient fables, will find an extenſive field to range in, by turning over ſome of the numerous works engraved from the beſt cabinets of Europe. We have offered theſe few, becauſe we think that with the architecture of the Grecians, we ſhould always have in view the gracefulneſs and ſignificancy of their compoſitions in works of ſculpture; how the ſtudy of both may tend to the emolument of their ſiſter ART, the works of the greateſt painters from Raphael downwards, ſufficiently declare. To ſum up the whole in the words of an original artiſt, "the art of compoſing, is the art of varying well, "taking heed, that variety be without confuſion, ſimplicity without nakedneſs, richneſs without "tawdrineſs, diſtinctneſs without hardneſs, and quantity without exceſs."

TO THE BOOKBINDER.

The plates may be placed in two different manners, either by ranging them all in their proper order at the end of the book, or by placing each plate in its reſpective part as near to the explanation of it as poſſible.

THE GRECIAN ORDERS OF ARCHITECTVRE.



THE

GRECIAN Orders of ARCHITECTVRE.

TABLE of CONTENTS.

THE PREFACE.

EXPLANATION OF THE SEVERAL ORNAMENTAL PLATES.

CHAP. I.

Page

The Introduction. - - - - 1

CHAP. II.

Of the Orders; Definition, the Riſe and gradual Improvement of their Characters. Of Modules. Tables of Altitudes and Projectures. Of the Principal Members of Mouldings and Ornaments of Profile. - - - 12

CHAP. III.

Daviler's Compariſon of Profiles. Intercolumniations. Diminution of the Shaft. Scroll Modilion. Baluſters. Pediment. Acroteria and Statues. Block Cornices. Vaſes. - - - 20

CHAP. IV.

Of the Doric Column with the Flutings. Of the Doric Entablature. Of the Doric Portal. Of the Doric Colonade. Of the Doric Arcade. - - 25

CHAP. V.

Of Pedeſtals. Of the Ionic Baſe and Column. Of the Capital. Of the Entablature. Of the Volute at large. Of the Flutings and Baſe at large. Of fluted Pilaſters. Of the Ionic Portal. Of the Ionic Portico with Pedeſtals. 32

CHAP. VI.

Of the Corinthian Order. Pedeſtal, Baſe and Column. Capitals and Entablatures. Of the Portico. Triumphal Arch. - - 37

CHAP. VII.

Of the Apertures of Doors and Windows. Of the Doric, Ionic and Corinthian Dreſſings. Of Venetian Windows. - - - 43

CHAP. VIII.

Some parallel Remarks upon the three Grecian Orders, as deſcribed by Vignola, Palladio and Scamozzi. - - - 45

CHAP. IX.

Of placing one Order upon another. Of Cornices for the Summits of Buildings. And of Cornices and Cielings for Rooms. - - 47

REMARKS

CONCERNING.

PUBLIC and PRIVATE EDIFICES.

CHAP. I.

General Hints concerning the Modern Architecture of Europe. Brief Accounts of ſome eminent Britiſh Architects. - - - 53

CHAP. II.

Some general Reflections about the Embelliſhment of Towns and Cities. Of Publick Edifices. - - - - 58

CHAP. III.

Practical Conſiderations. Diſtribution of Plans. Explanations of ten Deſigns. 61



THE

GRECIAN ORDERS

OF

ARCHITECTVRE.

CHAP. I.

The Introduction.

IT muſt be an effectual check to the vanity of man, when he conſiders that by the decrees and diſpoſitions of ſupreme wiſdom, neither the corporeal nor the mental faculties are ever all united in one perſon; but that for the maintenance and good order of ſociety, the gifts of nature, combined in a continually varied proportion, are with a marvellous œconomy divided and diſtributed amongſt the ſeveral individuals of our ſpecies; ſo that, how extenſive ſoever his capacity may be, how prompt his apprehenſion, how mighty his ſtrength, with the moſt exalted ambition, man will nevertheleſs ſtand in need of man. From the powers of the human being thus limited it is, that when we ſurvey the progreſs of genius either in the practices of art or the ſpeculations of ſcience, we find they never received their perfection from the ſame man who gave them birth; new inventions however valuable have for the moſt part

been

been produced in a rude and defective ſtate, and have in proceſs of time, little by little received from the ſkill and induſtry of others, ſuch additions and improvements as were neceſſary to give them all the perfection of which they are capable.

On the other hand it has not unfrequently happened that the arts inſtead of making any due advancement, even loſe the advantages which only a long ſeries of years, and the unremitted aſſiduity of true genius could obtain, for during an age of turbulence and diſtreſs no attention is beſtowed on them, abuſes creep unnoticed into the practice, and with the decline and ruin of empire, the arts themſelves decay and periſh: neither is this the only misfortune to which they are expoſed, for ſuch is the weakneſs of human nature, that in leſs calamitous times than thoſe we have ſuppoſed, the imagination may be vitiated, all ſound judgment perverted, and our purſuits led out of their proper track by the preſumption of the ignorant, the plauſive arguments of falſe reaſoners, or that propenſity with which the inconſiderate are determined to follow the ungovernable and unreſtrained career of a fancy animated with the rage of novelty, though fertile only in trifles and abſurdities.

Such viciſſitudes have happened to the art of which we are about to treat, as will appear from a view of what will be briefly offered on this ſubject.

The origin of Art is the ſame in all nations that have cultivated it; and it is without foundation that the honour thereof be aſcribed to one particular country preferably to all others; in all places neceſſity has proved to be the mother of invention, and every (*a*) people had in themſelves the ſeeds of contrivance in their various wants. The inventions of art were only more or leſs ancient as the nations themſelves were ſo, and as the adoration of the gods was introduced amongſt them ſooner or later: The Chaldeans and Egyptians, for example, had made much earlier than the Greeks, idols and other external forms of theſe imaginary beings, in order to worſhip them. It is the ſame of this as of other arts and inventions: the purple dye, not to ſpeak of others, was known and practiſed in the eaſt, long before the Greeks were acquainted with that ſecret. What is mentioned in holy writ, about carved or molten images, is likewiſe far more ancient than what we know of Greece. The carved images in wood of the firſt ages, and thoſe of caſt metal of later times, have different names in the Hebrew tongue.

They, who to judge of the origin of a cuſtom or of an art, and of it's paſſage from one people to another, adhere to the mere contemplation of any detached fragments which may offer certain appearances of likeneſs; and thus from ſome particular equivocal forms draw their concluſions about the generality of an art, are groſsly deceived. In this manner Dionyſius of Halicarnaſſus was in the wrong to pretend, that the art of wreſtling among the Romans was derived from the Greeks, becauſe the drapery or ſcarf worn by the Roman wreſtlers round their bodies, reſembled that worn by the wreſtlers of Greece. Art flouriſhed in Egypt from the earlieſt account of time; the greateſt obeliſks now at Rome are due to the Egyptians, and are dated as far back as the time of Seſoſtris, who lived near CCCC years before the Trojan war; they were the works of that king, and the city of Thebes was adorned with the moſt magnificent buildings, while art was yet unborn in Greece.

(*a*) Apud cæteras quoque gentes & nonnulla loca, pari ſimilique ratione, caſarum perficiuntur conſtitutiones. Non minus etiam Maſſiliæ animadvertere poſſumus ſine tegulis ſubacta cum paleis terra tecta. Athenis Areopagi antiquitatis exemplar ad hoc tempus luto tectum. Item in Capitolio commonefacere poteſt & ſignificare mores vetuſtatis Romuli caſa in arce ſacrorum, ſtramentis tecta. Ita his ſignis, de antiquis inventionibus ædificiorum, ſic ea fuiſſe ratiocinantes, poſſumus judicare. Cum autem quotidie faciendo tritiores manus ad ædificandum perfeciſſent, & ſolertia ingenia exercendo per conſuetudinem ad artes perveniſſent, tum etiam induſtria in animis eorum adjecta perfecit, ut qui fuerunt in his ſtudioſiores, fabros eſſe ſe profiterentur. Cum ergo ita fuerint primo conſtituta, & natura non ſolum ſenſibus ornaviſſet gentes, quemadmodum reliqua animalia: ſed etiam cogitationibus & conſiliis armaviſſet mentes, & ſubjeciſſet cætera animalia ſub poteſtate, tunc vero è fabricationibus ædificiorum gradatim progreſſi ad cæteras artes & diſciplinas, e fera agreſtique vita ad manſuetam perduxerunt humanitatem. Tum autem & inſtruentes animoſe, & proſpicientes, majoribus cogitationibus ex varietate artium natis, non caſas ſed etiam domos fundatas ex lateritiis parietibus, aut è lapide ſtructas, materiaque & tegula tectas perficere cæperunt: deinde obſervationibus ſtudiorum evagantibus judiciis, ex incertis ad certas ſymmetriarum rationes perduxerunt: poſtea quam animadverterunt, profuſos eſſe partus ab natura materiæ, & abundantem copiam ad ædificationes ab ea comparatam, tractando nutriverunt, & auctam per artes ornaverunt voluptatibus ad elegantiam vitæ. VITR. lib. II. c. 1.

The

The arts, though produced later in Greece than among the nations of the eaſt, nevertheleſs aroſe from the moſt ſimple elements; this ſimplicity may ſuggeſt that the Grecians took nothing from others, but were truly original; they ſcarcely had the opportunity of becoming plagiariſts of the Egyptians; for before the reign of Pſammitichus, the entrance into Egypt was denied to every ſtranger, and the arts had then already been cultivated by the Grecians. The voyages of their philoſophers and ſages were chiefly undertaken to inſpect into the literature, religion, and government of that famous kingdom. The conjectures of thoſe who derive the arts from the eaſt, ſeem better grounded, eſpecially if they make them paſs from Phœnicia into Greece, the people of both theſe territories having had very ancient connections together; the latter having received the knowledge and uſe of letters by Cadmus. Before the time of Cyrus, the Etruſcans, powerful by ſea, were alſo allied for a conſiderable time with the Phœnicians; of this there needs no other proof than the fleet which they equipped in common againſt the Phocœans.

What Villalpandus has furniſed concerning the Temple of Solomon, that thence the Grecians borrowed their richeſt deſigns of the Corinthian order, though ſupported with great parade of learning, and many ſpecious ſubtilties, only leads into a maze of uncertainties; in rearing of this ſtately building, heated by a luxuriant fancy, he rather acted the panegyriſt than the hiſtorian. Let us follow the ſurer traces of fact and uncontroverted hiſtory, as we can diſcover them in the pages of a writer worthy of our attention, who after having judiciouſly explained the ſeveral particulars relating to the temple, thus concludes; "But though in points like this I have been upon, it be moſt lawful to err, yet thoſe are more excuſable, who keep a conſtant regard to the ſacred original above all things, than thoſe who manifeſtly depart from it to follow their own fancies or the fabulous accounts of the Jews; now as I have drawn the greateſt part of my light from the former, I am ſenſible that thoſe who have been converſant with all the pompous deſcriptions we have extant, will be ſurprized to find this of mine come ſo vaſtly ſhort of the boaſted magnificence of this ſacred building. But here I deſire it may be remembered, that as this was deſigned to contain no more than could be met with, or fairly deduced from the ſacred writings, ſo the reader will at leaſt reap this benefit from it, that he will be better able to judge what is or is not authentic in other plans of this ſtructure than he could have been without it. The following obſervations from others upon the ſubject are in the ſame ſtrain. The viſion of Ezekiel, c. xl. and ſeq. is taken for a deſcription of a prophetic or myſtical temple that never exiſted but in the revelation that was made to him, and the repreſentation he has ſet down in his prophecy. As for ancient authors, we have none to produce but Joſephus and other Jews rather of a later date than he. Now all that we learn from them that has no foundation in Holy Writ, to us is no evidence at all. Much they knew or pretended to know from tradition, but that we preſume is not to be depended upon. We know no monuments they had beſide thoſe we have ourſelves: And the Hebrew tongue properly ſo called, being a ſort of dead language at the time theſe authors writ, it may well be doubted without ſinning againſt modeſty, whether they who had no other books to learn it by, than thoſe now in uſe, could underſtand it better than thoſe who ſtudy it at preſent.

The Grecians, during the proſperous times of their common-wealths, were a nation of all others at that time in the world the moſt ingenious and the moſt cultivated. They ſeem to have been endowed with the greateſt propenſity to the arts, and to have felt the ſtrongeſt natural averſion to whatever ſavoured of inelegance and barbariſm; their country was ſtyled the mother and nurſe of art and ſcience. It is this nation which challengeth to itſelf the ſyſtem of thoſe three modes of architecture afterwards named the Doric, the Ionic, and the Corinthian Orders, thus denominated from the places where they were either invented, or firſt received into uſe; during the practice of ſome ages, they acquired all the improvements the Grecian genius in its greateſt vigour could beſtow; the imitations of ſuch examples, it may be preſumed, will ever excell all other inventions.

When the Roman ſtate had attained to the higheſt pitch of its glory, and the moſt cultivated as well as the moſt powerful nations were ſubdued and were conſidered only as provinces of that mighty empire, the inhabitants of Italy diſtinguiſhed themſelves as well by their love and ſtudy of the fine arts as by their ſkill in arms, in both of which they muſt be allowed to ſtand

next after the Grecians: it is then first to Athens and afterwards to Rome that the modern world owes the method of culture for every refinement, but at the same time it is proper to observe, that the Romans, either through ignorance or pride, not content with the orders and dispositions of Athenian architecture, ventured at several licentious alterations; they tacked two spurious orders, the Tuscan and the Composite, the last called also Latin and Roman, to the three genuine ones, which alone are sufficient to answer all the purposes in building, and which can never fail of obtaining the preference whenever they are examined by an attentive and intelligent spectator. It is matter of great regret to the investigators of this art, that among the writers of antiquity we find little on which to fix our ideas or form our taste. The writings of VITRUVIUS POLLIO have been transmitted down to us; this classic author flourished about the DCC year of Rome in the reigns of Julius Cæsar and of his successor Augustus, to the latter he dedicated his ten books of architecture, and to these next to the vestiges of ancient edifices, posterity remains indebted for many successful attempts to restore architecture in its original simplicity and beauty; nor besides Vitruvius were wanting other ingenious men, who in their writings had probably given many illustrations and maxims of their art; several of their names have descended down to us, but their writings have perished; yet what sort of artists they were, if their books have not remained to inform us, their works in many noble edifices, still remaining, give faithful testimony to their merit, and chiefly in Greece and Italy, where this profession was better preserved, and maintained its reputation, that for the course of about two centuries from the days of Augustus, the manner and style of building remained unaltered, although the false taste for internal decorations was prevailing even in the time of (*b*) Vitruvius. Tacitus informs us in general, that there were no persons of great genius after the battle of Actium, but in the decline of the Roman empire, such a decline and change seemed also to affect the intellects of individuals, whence learning and all the fine arts, which had flourished to admiration and for so long a period, fell into disrepute, and were absorbed by the barbarisms which overwhelmed the land. Architecture soon saw itself miserably transformed, every good mode thereof was overthrown and spoiled, every true practice corrupted, its antique graces and majesty lost, and a manner altogether confused and irregular introduced, wherein none of its former features were discernible.

The Goths prevailed!

At last came the fifteenth and sixteenth centuries of the christian æra, so glorious for the restoration of literature and of arts; then it was that many happy minds, shaking off the rust of ignorance and freeing themselves from the chains of indolency which had fettered the preceding generations, recalled again into life all the fine arts and all the finest faculties and rules, so that it seemed as if the taste of old Greece and Rome was revived in its true splendor and dignity; however to keep within due limits, it sufficeth to say, that architecture in Italy very soon appeared with the expected advantages, and the writings as well as the works of the several great masters of that time remain the undeniable proofs of their abilities, of whom however short, yet honourable mention should be made whenever this subject comes in question.

The first of note was FILIPPO DISER BRUNELESCHI of Florence, who flourished in the beginning of the XV. century; by his diligent observations, and studies of the antique edifices, he cast a new light upon architecture at that time altogether barbarous; after him, LEO BATTISTA ALBERTI, was the first of the moderns who published a learned treatise of the art, it is said published, because ANTONIO FILARETE and FRANCESCO SANESE it has been asserted, had written also some tracts upon the same subject, which were never printed; but to speak again of Alberti; this man having contemplated with great attention the antiquities at Rome, returned into Tuscany, and by his designs and precepts reformed the false and barbarous practices then prevalent, and recalled his countrymen to their former estimation of art. From the same spot arose the celebrated MICHAELANGELO BUONAROTI, Statuary, Painter, Architect and Poet, nor

(*b*) At hæc falsa videntes homines, non reprehendunt sed delectantur, neque animadvertunt, si quid eorum fieri potest necne. lib. VII. c. 5.

did

did other places in Tuſcany fail in the production of eminent artiſts, among others, BALDASSAR PERUCCI diſtinguiſhed himſelf; PIETRO CATANEO was of Sienna, whoſe eight books have not been without great uſe, and are worthy of much eſteem. LEON LEONI and GIORGIO VASARI, both of Arezzo, were converſant in the arts: theſe two have written ſome accounts of ſtatuaries, painters and architects.

It would have been matter of wonder, if in the ſun-ſhine of thoſe days there had been wanting excellent artiſts at Rome, where ſo many piles of ruined grandeur ſtood; thither repaired BRAMANTE, and the great RAPHAEL from Urbino, who uniting their talents with thoſe of GIULIANO and ANTONIO SANGALLO, raiſed the profeſſion to its priſtine greatneſs and dignity; GIULIO ROMANO, a diſciple worthy of Raphael, muſt have tranſmitted his name with fame to poſterity, had he left nothing more than the villa near Ponté-molle, built after his deſigns for Pope Clement VII.

ANTONIO LABACCO was of Rome; he delineated in a fine manner the ruins of ſeveral antiquities; which may be ſeen in his book. In Lombardy, among the many who are celebrated, we ſelect two, SEBASTIAN SERLIO of Bologna, and GIACOMO BAROZZI of Vignola: nor was the Veroneſe territory in that age inferior to any other in Italy; for all at once appeared three very able men, for the re-eſtabliſhment of the art. One was FRA. GIOCONDO, a man of ſurpriſing genius and indefatigable induſtry, maſter of every ſcience, and well verſed in the practice of every art; he was the firſt who amended and illuſtrated the writings of Vitruvius, till then, as he informs us, neither legible nor intelligible, through the great incorrectneſs and obſcurity of the copies. He was the firſt that carried into France a taſte for ancient architecture in the reign of Lewis XII. He built two bridges at Paris, and ordered many great works before he left that kingdom; he ſignalized himſelf alſo at Rome, at Venice, and elſewhere: when this fame perſonage was far advanced in years and decrepitude, aroſe GIOVANNI MARIA FALCONETTO, of whom Vaſari ſpeaks with great commendation. Soon after appeared MICHELE SAN MICHELI, who greatly improved on the diſcoveries of the two laſt mentioned. To theſe ſucceeded other two great maſters, ANDREA PALLADIO, excelled by none, and VINCENZO SCAMOZZI. The next to mention, is JACOPO SANSOVINO, who, though born in Tuſcany, paſſed almoſt all his days at Venice, and adorned that city with ſeveral magnificent buildings. GIO. ANTONIO RUSCONI handled in a maſterly manner the precepts of Vitruvius. Nor muſt we paſs over in ſilence GUISEPPE VIOLA ZANINI of Padua, who has left behind him a good treatiſe of architecture, partly from Vitruvius, and partly from others; but before him, OTTAVIO REVESI of Vicenza, had alſo propoſed a new method of meaſuring the five orders, which has not been adopted, becauſe, for any conſiderable works it would become too laborious, and waſte too much time. It would be to no purpoſe to mention other names of leſs note, which are preſerved in more particular accounts of the artiſts of thoſe days; yet among the number, two Frenchmen, JEAN BULLANT and PHILIBERT de L'ORME, are worthy of particular remembrance. Theſe and others of the ſame country, were, in all likelihood, ſcholars of *Seb. Serlio* of Bologna, at the time when he was called into France by Francis I. It is remarkable that ſeveral of the famous men abovementioned were excellent painters, and it cannot be too ſtrongly advanced how much the union of theſe arts in the ſame perſon contributes to their mutual advantage.

By the eſtabliſhed order of events, power and riches increaſe or diminiſh gradually; and as was ſaid before, the arts do not at firſt receive the greateſt improvement, nor are loſt by any ſudden negligence; yet by a ſtrange and uncommon fatality, the ſucceeding age to that of which we have ſpoken, produced inſtances which ſeem to overthrow theſe general obſervations. For the fine arts which but the preceding century, were brought very near to perfection in the next enſuing one, fell almoſt into a total decay; and it would have been leſs ſhameful for the Italians (it is an Italian C. A. Pompei that aſſerts it) to have entirely loſt the arts, than to have preſerved them diſfigured and corrupted, and thus to have expoſed themſelves with unjuſtifiable levity to the cenſure of other nations. One of the principal cauſes of this depravity, was the deſire of novelty, which is very commendable when cautiouſly attempted with proper diſcernment and ſound judgment; otherwiſe, without theſe two neceſſary guides, it muſt ever be productive of great corruption and abuſe. The wild fancies of BORROMINO, and the peculiar affectedneſs of BERNINI, both as a ſtatuary and an architect, have

diffuſed ſo rank a poiſon, that its baneful influences are felt at this very day. Rossi and B. Pozzi, with ſeveral of their cotemporaries, abſurdly deviating from the antique models and the rules laid down by their predeceſſors, introduced ſuch wretched (*a*) deformities by way of ornaments to their architecture, as may truly vie with the moſt whimſical inventions of Groteſc or Chineſe deſigns.

Cornices and architraves were no longer traced rectilinear, but in the ſame front were, without any reaſon, broken in a hundred places; they were turned and twiſted into ſuch ſerpentine lines, that the deſcription of the ſerpent in Virgil may with great propriety be applied.

Sinuantque immenſa volumine terga.

Columns were almoſt deemed uſeleſs; in their ſtead corbels and foliages were fantaſtically placed to ſupport the heavieſt weights, contrary to all appearances of ſolidity and the ſage advice of Palladio. Few pediments were deſigned, and when on any occaſion they were introduced, they were ſo broken and twiſted, that one is at a loſs to compare them to any thing in art or nature: how few members were carved with true antique elegance! how few reliefs in ſculpture which ſo delight the beholder's eye! how few columns fluted! what a deal might be ſaid of the modern form of arches, and of certain new curves and entablatures, for theſe were no longer deſcribed from one center, but from ſeveral; and having a mixture of different lines and angles, are therefore deprived of the ſtrength requiſite to ſupport the incumbent weight, to which the circular arches or ſegments of them are ſo naturally adapted. The idea of the chaſte antique taſte was thus totally baniſhed from Italy; of this, reaſon will convince any one who attentively views their later edifices; for reaſon alone aſſiſts our obſervations and compariſons, by which we can diſtinguiſh between good, bad, and indifferent; will our reaſon ever perſuade us, that a prop placed on purpoſe out of the perpendicular, and made twiſted, can ſuſtain, better than one whoſe ſides are rectilinear, and which is placed perpendicularly under its weight? what reaſon can be given, why a large and weighty maſs ſhould ſtand firmer on a baſe, which, inſtead of being ſpread out at bottom, ſhould be drawn narrower? with what propriety are feſtoons of fruits and flowers placed to ſuſtain cornices and other weighty parts? let it then be aſked if theſe accuſations are groundleſs? or if theſe groſs defects are agreeable to the nature of things? for art ſhould ever in its productions ſtudy to imitate the ſimplicity obſervable in nature, and as occaſion may require, to enrich and adorn the ſubject, but never to load it with deformities; it will therefore be neceſſary to take further notice, in order to avoid them, of the more notable abuſes introduced or ſtill remaining from Gothic unſkilfulneſs, ſince we have already touched upon ſome. Among other bad cuſtoms is that of making ſquare archivolts to ſpring from the tops of circular columns, which for convenience, on ſeveral occaſions, and becauſe it does not offend the ſight of thoſe who do not penetrate to the bottom of art, has been often practiſed without further conſideration; but be it obſerved, that the archivolt falls without the ſhaft of the column underneath, and that by as much as the ſquare of the plan of the archivolt exceeds the inſcribed circular plan of the top of the column, ſo much does it produce of falſe bearing; for the corners of that ſquare do not reſt upon the ſhaft of the column, but upon the projecture of the abacus of the capital, which was never intended for a ſupport, but for mere ornament: for which reaſon this error ſhould be rejected, no ancient example of it remains; and though L. Alberti, M. Sn. Micheli, Scamozzi and others of the moderns have practiſed it, perhaps only through the blunder of their workmen, their authority will not juſtify ſuch an abaſe; to remove the defect, there ſeems no other remedy, than to couple two columns together, whereon place a ſuitable architrave or impoſt, which having its ſides ſquare, is adapted to receive the angles of the archivolt, and thus it will have a ſolid bearing, which without diſpoſing the columns by couplets, it cannot have: it is in this manner that the peripteral arcades are ſupported in the temple of Bacchus, (now St. Agneſe) near Rome, which has been imitated by ſeveral great maſters among the reſtorers

(*a*) Sed hæc quæ a veteribus ex veris rebus exempla ſumebantur, nunc iniquis moribus improbantur. Nam pinguntur teſtoriis monſtra potius, quam ex rebus finitis imagines certæ. Pro columnis enim ſtatuuntur calami, pro faſtigiis harpagiorum flores cum criſpis foliis & volutis. Item candelabra ædicularum, ſuſtinentia figuras, ſupra faſtigia earum ſurgentes, ex radicibus convolutis coliculi teneri plures, habentes in ſe ſedentia ſigilla, non minus etiam ex coliculis flores dimidiata habentes ex ſe excurſia ſigilla, alia humanis, alia beſtiarum capitibus ſimilia. Hæc autem nec ſunt nec fieri poſſunt, nec fuerunt. Ergo ita novi mores coëgerunt, uti inertia mali judices conniveant artium virtutes. Quemadmodum enim poteſt calamus vere ſuſtinere tectum, aut candelabrum ædiculas, & ornamenta faſtigii, ſeu coliculus, tam tenuis & mollis, ſuſtinere ſedens ſigillum, aut de radicibus & coliculis ex parte flores dimidiataque ſigilla procreari? &c. Lib. VII. c. 5.

of

of architecture, by Sanſovino in the procuratie at Venice, by Palladio in the cortile of the convent of S. Giorgio Maggiore in the ſame city, and in the palazzo publico at Vicenza; likewiſe by moſt of the beſt Florentine architects, and by many others who, ſtudious to avoid every eſſential error, were deſirous that the edifices they deſigned ſhould not fail in correctneſs. Vaſari in his life of L. Alberti, and in the preface to his architecture, reprehends the laſt mentioned miſtake; and Serlio, lib. iv. treating of buildings wherein arches may be required, argues thus, " if we would place inſulated columns under arcades, it will be the greateſt of fallacies, becauſe the ſquare corners of the archivolt falling upon a circular column will have their bearing beyond the naked of the ſhaft. Scamozzi, part 2, lib. vi. Cap. viii. thus cenſures and clears himſelf;" nor to ſpeak of certain ſtupid workmen, who in their works have ſometimes omitted the impoſts, and make the arches to reſt upon the capitals. But enough hath been ſaid againſt this abſurdity; let it only be obſerved, that all ſorts of arches or vaults, whether groined or otherwiſe, muſt bear upon impoſts, and theſe ſupported by columns, pillars or piers of ſufficient reſiſtance. It ſhould be well remembered, that no other figure than the circle can be allowed to the plans of columns; the plans of pilaſters are ſquare, and the ſurface of either will always be disfigured with any other ornaments than the flutings, ſimple or cabled, as ſeen in the remains of the beſt authenticity. Some of the firſt reſtorers have fallen into a monſtrous manner of loading the ſhafts of columns with circular bands or ſquare ruſticks, the ſight of which baniſhes at once from the mind all appearance of gracefulneſs and ſtrength; this diſguſtful idea could only ariſe from ſeeing a column erected with its rough blocks, which wanted the further labour of the artificer to reduce it to its proper naked ſize, ſince it was frequently cuſtomary with the ancients to finiſh the ſeveral parts of an order after they had fixed the materials in the places where they were to remain. As to entablatures it cannot be too often repeated, that if they want their due proportion to their reſpective columns, they will either turn out too light or too heavy; this will be more particularly noticed in ſome following remarks. Several errors may be committed in the diſpoſitions of internal angular columns and pilaſters, which deſerve the eſpecial attention of artiſts. Another abuſe or modern licence, never to be approved, is cutting into the architrave to make apertures for doors or windows; again, it is but a poor ſhift to make an architraved entablature, for ſuch expedients it is often beſt to omit both architrave and frize. It muſt again be obſerved, that pediments ill placed, or broken, or twiſted or ſcrolled, as likewiſe an unreaſonable multiplicity of pediments are only ſo many glaring deformities inſtead of ornaments, and nothing is more ſo than a triangular pediment within a ſemi-circular archivolt. Arcades with only a part of a column projecting from the piers, is a practiſe that nothing can juſtify but reaſons of œconomy (and it is yet greater œconomy to have the piers plain;) for no part of the beautiful forms of columns was ever intended to be mutilated, or apparently ſunk within a wall; they ſhould always project their entire diameters, and moreover ſufficiently clear all the mouldings of their capitals and baſes, otherwiſe let pilaſters be uſed to adorn or ſtrengthen the piers.

Pannels ſunk within the dies of pedeſtals are to be cautiouſly uſed. Spiral columns with or without ſpiral flutings or other ornaments, (ſuch are thoſe of the great altars of St. Peter's at Rome, of the Val de Grace, and of the Invalids at Paris) however artfully deſigned and well executed, ſeem invented chiefly to pleaſe the vitiated fancies of thoſe who delight in whimſical contrivances. It is pretended that the Emperor Titus, among the ſpoils which he brought from Jeruſalem, brought alſo ſome ſpiral marble columns, which he placed in the Temple of Peace; one of theſe had been removed to St. Peter's, and is now to be ſeen in the chapel of the crucifix, which is the firſt on the right hand of the principal entrance; but the tradition of this column may be ranked among others of their pious frauds; Raphael, in one of the Cartoons, in compliance with this ſtory, has deſigned the porch of the temple with ſpiral columns.

Caryatic and Perſic (*b*) figures muſt always be ſuppoſed to have pilaſters behind them, with capitals like baſkets of flowers placed upon the heads of the figures; according to Pliny, the Rotunda at Rome

---

(*b*) Carya civitas Peloponneſi, cum Perſis hoſtibus contra Greciam conſenſit, poſtea Græci per victoriam glorioſe bello liberati communi conſilio Caryatibus bellum indixerunt. Itaque oppido capto, viris interfectis, civitate deleta, matronas eorum in ſervitutem

Rome was decorated with this ſort of ſtatues. *Agrippæ Pantheum decoravit Diogenes Athenienſis, & Caryatiades in columnis templi ejus probantur, inter pauca operum, ſicut in faſtigio poſita ſigna, ſed propter altitudinem loci minus celebrata.* c. 3. l. xxxvi. and of their capitals of metal the ſame author is ſuppoſed to ſpeak in theſe words, *Syracuſana ſunt in Pantheo capita columnarum a M. Agrippa poſita.* c. 3. l. xxxiv. With whatever propriety theſe conceits might have been received among the Grecians, from the events which gave them birth, the notion of indignity and ſlavery they convey, ſhould be a motive to aboliſh them; it was a cruel deſign of the artiſt to place the figures of four criminals, women half naked, in the chamber of juſtice at the Stadt-houſe, at Amſterdam.

It may be frequently neceſſary to introduce certain modern compoſitions for medalions, coats of arms, &c. Whenever it is ſo, let them be placed properly, without interruption, to any of the principal members of architecture, and in the delineations of all ſuch things, ſimplicity muſt ever be preferred to any ill-placed and confuſed decoration, remembering the cenſure of Apelles to an inferior painter, "not knowing how to make her beautiful, you have made her rich." Certain it is, that meer trifles laid on with an abſurd profuſion, coſt more than the moſt elegant ornaments diſpoſed with judgment and taſte.

If it be aſked why the architecture of Greece and Rome ſhould claim the preference to the modes derived to us from our immediate anceſtors, who, enjoying the ſame power of reaſon, and having been civilized and poliſhed in other matters, could not fail of a juſt diſcernment for their uſes and wants in building? the anſwer is, that the Grecians and their ſcholars the Romans, not only eſtabliſhed true principles, but had ſuch opportunities to cultivate and bring the art to perfection, as never any other nations had, and it was impoſſible they ſhould have.

For in what country were there ever ſuch edifices raiſed as in Greece and in the Roman empire? the princes and governors of the people were continually attentive to every public emolument; all the works of art were employed to great and noble purpoſes, ſuch as were moſt beneficial to the ſtate, and chiefly for ſacred and public uſes; ſimplicity and moderation were found among the citizens; art was never debaſed by a puerile taſte, never deſcended to trifles, to the folly of trinkets and toys, but whatever was the work of artiſts, was worthy of the exalted ideas of the nation. Miltiades, Themiſtocles, Ariſtides, Cimon, and others, the chiefs and defenders of Greece, were not more ſumptuouſly lodged than their fellow-citizens, but monuments were reverenced as ſacred edifices. What an emulation muſt have been excited, when all the cities were eagerly vying with one another to poſſeſs the fineſt ſtatue, or by a generous contribution to furniſh the expences for one, either of a God or of a Conqueror, at the public games? ſome cities were recorded ſolely on account of their being in poſſeſſion of a fine ſtatue. Aliphera was only known by a brazen ſtatue of Pallas, the work of Hecatodorus and Soſtrates. Thus the œconomy of private perſons enabled them to contribute largely towards public expences; their religious ceremonies were performed with ſolemnity and pomp, the multitude was called together on particular events to ſplendid games; theatres, amphitheatres, ſtadias, circuſſes, hippodromes, naumachias, baths, porticos, baſilicas, triumphal arches and temples, all magnificently invented, and on many the richeſt materials were often laviſhed, emulated only by the elegance of their deſigns; theſe furniſhed glorious occaſions to the architects of thoſe times to diſplay their talents, to cultivate and bring their art every day nearer to perfection, till they at length eſtabliſhed ſuch modes and forms as became more and more aſcertained

---

tem abduxerunt: nec ſunt paſſi ſtolas neque ornatas matronales deponere: uti non uno triumpho ducerentur: ſed æterno ſervitutis exemplo gravi contumelia preſſæ, pœnas dare viderentur pro civitate. Ideo qui tunc architecti fuerunt, ædificiis publicis deſignaverunt earum imagines oneri ferundo collocatas, ut etiam poſteris nota pœna peccati Caryatium memoriæ traderetur. Non minus Lacones Pauſania Cleombroti filio duce, plataico prælio, pauca manu infinitum numerum exercitus perſarum cum ſuperaviſſent, acto cum gloria triumpho, ſpoliorum & prædæ, porticum Perſicam ex manubiis laudis & virtuti, civium, indicem victoriæ poſteris pro trophæo conſtituerunt, ibique captivorum ſimulacra, barbarico veſtis ornatu, ſuperbia meritis contumeliis punita, ſuſtinentia tecta, collocaverunt; uti & hoſtes horreſcerent timore eorum fortitudinis affecti, & cives id exemplum virtutis aſpicientes, gloria erecti, ad defendendam libertatem eſſent parati. Itaque ex eo multi ſtatuas perſicas ſuſtinentes epiſtylia & ornamenta eorum collocaverunt & ita ex eo argumento varietates egregias auxerunt operibus. Lib. I. c. 1.

among

among a polite and free people that could not be ſatisfied but with excellence; while among other nations where ſuch ſhews, games, and exerciſes were never introduced, architecture always appeared in its infant ſtate, and was only uſed with many aukward contrivances, for the ſtructure of private habitations, and of very few public edifices, juſt as the mere exigency of things required.

Having already mentioned the Goths, it may not appear altogether improper to ſay ſomething of their architecture. The name of Gothic was given to all ſuch buildings as were not deſigned according to the rules of Grecian or Roman architecture. There are two ſorts of Gothic, the antient and the modern, (but improperly ſo called;) in England and the northern parts of Europe, the antient Gothic includes the Saxon and Daniſh, in which indeed we may obſerve ſome traces of elegance and ſtrength. It appears that their artiſts were not entirely ignorant of proportions, though they did not confine themſelves ſtrictly to ſuch as were beautiful; ſolely attentive to render their works ſolid and durable, they were more ſtudious to produce the marvellous by the enormous ſize of their fabrics, than by any regularity of ſtructure or propriety of ornaments. Theſe are the marks that characteriſe the Goths, a rough unpoliſhed people, of huge ſtature and of dreadful looks, that iſſuing forth from the northern parts of our hemiſphere, where neceſſity taught them to guard againſt the violence of ſtorms and the fury of torrents, increaſed by the inundations of melted ſnow, carried into milder climates their monſtrous taſte of heavy architecture, and only in a ſmall degree corrected their encumbered notions by the ſight of Roman edifices; but the models they had to contemplate were not without their faults, for from the reign of Alexander Severus, architecture had greatly degenerated. Thus a want of natural genius, a want of models, and every thing contributed to hinder the Goths from acquiring any good mode of building. This is the ſummary of the antient or heavy Gothic architecture; ſome of the cathedrals and other public edifices, not only in this country, but in many others of the continent, ſtill remain as models of this ſort. Modern Gothic, as it is called, is deduced from a different quarter; it is diſtinguiſhed by the lightneſs of its works, by the exceſſive boldneſs of its elevations and of its ſections, by the delicacy, profuſion and extravagant fancy of its ornaments: the pillars of this kind are as ſlender as thoſe of the antient Gothic are maſſive. Such productions, ſo airy, cannot admit the heavy Goths for their authors; how can be attributed to them a ſtyle of architecture which was only introduced in the X century of our æra, ſeveral years after the deſtruction of all thoſe kingdoms which the Goths had raiſed upon the ruins of the Roman Empire, and at a time when the very name of Goth, was entirely forgotten? From all the marks of this new architecture, it can only be attributed to the Moors, or what is the ſame thing, to the Arabians or Saracens, who have expreſſed in their architecture the ſame taſte as in their poeſy, both the one and the other falſely delicate, crowded with ſuperfluous ornaments, and often very unnatural. The imagination is highly worked up in both, but it is an extravagant imagination, and this has rendered the edifices of the Arabians (we may include the other orientals) as extraordinary as their thoughts: if any one doubts of this aſſertion, let us appeal to thoſe who have ſeen the Moſcheas and the palaces of Fez, or ſome of the cathedrals in Spain, built by the Moors; one model of this ſort is the church at Burgos; and even in this iſland, there are not wanting ſeveral examples of the ſame. Such buildings have been vulgarly called modern Gothic, but their true appellation is Arabeſe, Saracenic, or Moreſe.

This manner was introduced into Europe through Spain. Learning flouriſhed among the Arabians all the time that their dominion was in full power; they ſtudied philoſophy, mathematics, phyſic, and poetry: the love of learning was at once excited in all places that were not at too great a diſtance from Spain; theſe authors were read, and ſuch of the Greek authors as they had tranſlated into Arabic were from thence turned into Latin. The phyſic and philoſophy of the Arabians ſpread themſelves in Europe, and with theſe their architecture; many churches were built after the Saracenic mode, and others with a mixture of heavy and light proportions; the alteration that the difference of climate might require, was little if at all conſidered. In the moſt ſouthern parts of Europe and in Africa, the windows (before the uſe of glaſs) made with narrow apertures,

and placed very high in the walls of the buildings, occaſioned a ſhade and darkneſs within ſide, and were well contrived to guard againſt the fierceſt rays of the ſun, yet were ill ſuited to thoſe latitudes where that glorious luminary ſheds its feebler influences and is rarely ſeen but through a watry cloud. The heavy Gothic by Sir C. Wren, is diſtinguiſhed as Anglo-Saxonic, the lighter as Saracenic, of this laſt the following account may be added to what has juſt now been delivered on the ſame ſubject. The holy war gave the chriſtians, who had been there, an idea of the Saracen's works, which were afterwards imitated by them in the weſt; and they refined upon it every day as they proceeded in building churches. The Italians (among which were yet ſome Greek refugees) and with them the French, Germans and Flemings, joined into a fraternity, procuring papal bulls for their encouragement and particular privileges. They ſtiled themſelves *Free-Maſons*, and ranged from nation to nation as they found churches to be built (for very many in thoſe days were every where in building) through the piety of multitudes. Their Government was regular, and where they fixed near the building they made a camp of hills. A ſurveyor governed in chief, and every tenth man was called a warden, and overlooked each nine. The gentlemen of the neighbourhood, either out of charity or commutation of penance, gave the materials and carriage, and hence were called *accepted Maſons*. It is admirable with what œconomy and how ſoon they erected ſuch conſiderable ſtructures. But as all modes, when once the old rational ways are deſpiſed, turn at laſt into unbounded fancies, the tracery of theſe architects who affected towers and ſteeples, though the Saracens affected cupolas, introduced too much mincing of the ſtone into open battlements, ſpindling pinnacles, and little carvings without proportion of diſtance, ſo that the eſſential rules of good perſpective and duration were forgot.

Shall We, then, who by a conſiderate retroſpection upon the works of former ages, are enabled to judge with equal diſcernment and impartiality between the various veſtiges at this day remaining? ſhall we then heſitate to decide in favour of Grecian architecture? where not a ſingle ornament is placed, but what gives beauty, where every part is ſimple, meaſured and reſtrained to a juſt proportion, and fitted to the intended purpoſes; where conveniency, ſolidity and dignity can always be united in every deſign of public or private concern.

Proportion, Eurythmy and Symmetry, require their particular explanations, previouſly to the articles treated of in the next chapter. Proportion (*a*) in architecture conſiſts in that reciprocal relation, which the ſeveral parts and total bulk of any fabric have among themſelves with reſpect to quantity in length, breadth and depth; ariſing primarily from their joint relation to a certain given quantity or common meaſure, by which their magnitudes are regulated and determined. Thus the proportion of the ſhaft of a column, which conſiſts in the relation of it's length to it's diameter, being given, the terms of that proportion preſcribe meaſures correſponding to themſelves, for all the other parts of the order; as for the baſe and capital, for the entablature, or any of it's principal diviſions: and alternately, if the relation of the entablature and it's principal diviſions to each other be aſſigned, the magnitude of the column and that of it's members, with the abſolute quantity of the entire order, are from thence determined; and from this mutual dependence of the different parts, interchangeably affecting each other, reſults that general harmony which gives both ſtrength and beauty to a building.

Now thoſe proportions are adapted to produce beauty in the higheſt degree, which preſent all the minuter diviſions fairly and diſtinctly to the ſpectator's eye, ſo that he is enabled to judge of their relative meaſures with tolerable exactneſs; but ſuch only can do this as are formed from the moſt ſimple meaſures or numbers in their loweſt terms, which are clearly the moſt ſtriking, and therefore preferable to others more complex, which even the moſt experienced in architecture will never pretend to diſcern. For examples of what we mean by numbers in their loweſt terms,

---

(*a*) Proportio quæ Græce analogia dicitur, eſt ratæ partis in omni Opere totiuſque commodulatio, ex qua ratio efficitur ſymmetriarum. Lib. III. c. 1.

Nulla architecto major cura eſſe debet, niſi uti proportionibus ratæ, partis habeant ædificia rationum exactiones. Lib. VI. c. 2.

take

take the following for ſurfaces to which, as the queſtions may be ſtated, the third proportional numbers may be annexed; 1 : 1, 1 : 2, 1 : 3, 1 : 4, 1 : 5, 1 : 6, &c. or 2 : 3, 3 : 4, 4 : 5, 5 : 6, or 3 : 5, 5 : 7, 7 : 9, &c. to make choice of the beſt proportions in different caſes, the real uſe and intention of what is to be determined muſt be conſidered, and then the queſtion muſt be aſked which dimenſion ſhould prevail? height, breadth or depth, or whether they may all be equal, which is the cubic proportion; for a familiar example take a door way; the meaneſt ſhould be high enough for a man to paſs under without ſtooping, therefore its height may be juſtly fixed at ſix feet; now as the height of a man walking with his arms at liberty, is nearly twice his own breadth, the breadth of the door way muſt be to its height as 1 : 2, that is, three feet wide to ſix feet high: in all other inſtances it will conſtantly turn out that the moſt beautiful proportions are likewiſe the moſt uſeful, the moſt convenient and the ſtrongeſt.

Eurythmy (*b*) is the perfect conſonance of all the relative meaſures throughout all the proportioned parts. De Laet's explanation is very elegant; *aptatur autem hæc vox cuivis rei decenti, concinnæ, aptæ, corpori, numero, greſſui ſeu motui, voci. Videtur autem ea dictione exprimi quod Italice dicimus, garbato, Grazioſo.* The word was not only uſed by the antient architects, but likewiſe by their poets and muſicians; by the former to ſignify the juſt cadences of their verſes, and by the latter to expreſs the agreeable melody of their notes: hence proceeded that invincible power of pathetic accents over the ſoul!

> Such was the bard whoſe heavenly ſtrains of old,
> Appeas'd the fiend of melancholy Saul;
> Such was, if old and heathen fame ſay true,
> The man who bade the Theban domes aſcend,
> And tam'd the ſavage nations with his ſong;
> And ſuch the Thracian whoſe harmonious lyre,
> Tun'd to ſoft woe, made all the mountains weep;
> Sooth'd even th' inexorable powers of Hell,
> And half redeem'd his loſt Eurydice.
>
> ARMSTRONG. *Art of preſerving health.*

By Symmetry (*c*) is underſtood the parity and equality of the right and left parts of an edifice, of the high and low ones in the ſame front; in figure, in ſize, in ſituation, in every point that may render the correſpondent parts ſimilar and equal. The human viſage is not more disfigured by a wen, than a building is by any irregular excreſcence that at once deſtroys the beautiful effects of ſymmetry.

To conclude; although it is true that the proportions and forms of architecture are, in ſome degree arbitrary, and not of the number of thoſe things, which have a natural preciſe and poſitive beauty like the concords of muſical tones, &c. yet as they are eſtabliſhed upon principles long ſince received, and likewiſe by what among the artiſts is called *coſtume*, the eye once familiariſed with them is ſhocked at any eſſential deviations, their beauties becoming very diſtinct and forcible; add to this, that for above theſe two thouſand years, it has been beyond the power of human abilities, not only to introduce a new order, but even the leaſt moulding or member whereof the pattern is not already given.

(*b*) Eurythmia eſt venuſta ſpecies, commoduſque in compoſitionibus membrorum aſpectus. Hæc efficitur cum membra operis convenientia ſunt, altitudinis ad latitudinem, latitudinis ad longitudinem, & ad ſummam omnia reſpondeant ſuæ ſymmetriæ. Lib. I. c. 2.

Uti non ſit conſiderantibus aſpectus eurythmiæ dubius. Lib. VI. c. 2.

(*c*) Symmetria eſt ex ipſius operis, membris conveniens conſenſus ex partibusque ſeparatis ad univerſæ figuræ ſpeciem, ratæ partis reſponſus. Lib. I. c. 2.

The

The ſtrong, the mean, and the delicate ſtyle of building cannot be fixed at any other terms, than nearly at thoſe obſervable in the Grecian orders; ſince, if you were to begin the progreſſion much above what they have eſtabliſhed, it would deſtroy their very mechanical principles and diſtinctions; for if inſtead of 8: 10: 12, which the author of this treatiſe has ventured to aſſign, you take 12: 15: 18, diameters for the entire altitudes; in theſe two laſt terms, either the columns would run into an exceſs of height, or the entablature into an unwarrantable heavineſs; both the appearance and mechaniſm of ſuch conſtructions muſt be rejected upon the ſlighteſt examination; but the nearer you approach the true terms aſſigned, as the beſt moderns have done, the errors gradually become leſs ſenſible: yet why ſhould we ſeek after any other equivocal meaſures when we can obtain the moſt deſirable characters and quantities from indiſputably authentic Attic models.

CHAP. II.

Of the Orders, Definition, the Riſe and gradual Improvements of their Characters. Of Modules. Tables of Altitudes and Projectures. Of the Principal Members. Of Mouldings and Ornaments. Of Profile.

IN every edifice, whether public or private, great or ſmall, the conveniency, ſtrength and beauty of its (*a*) architecture, can only ariſe from a proper intelligence of the orders: The word (*b*) order, in contradiſtinction to confuſion, ſignifies a regular aſſemblage and arrangement of the ſeveral proportions and ornaments of an entire column, with its entire entablature. The trunks of trees left ſtanding or ſet up an end, and others laid acroſs them to ſuſtain the covering, gave the firſt hint of an order, a ſuppoſition too natural and too obvious to be rejected. Theſe rough materials were afterwards wrought into better form by the workman's ſkill; the firſt ſtatues, as well as buildings, were of (*c*) wood, before ſtone and marble came into uſe; for the arts which depend upon deſign, had their beginnings, like all other inventions, in the neceſſary; then they proceeded gradually to the beautiful, and at laſt they fell into the ſuperfluous and extreme: theſe are the three principal degrees of art. Sculpture and Painting advanced faſter towards perfection than architecture, becauſe this laſt has not any determined object in nature for imitation towards a complete deſign; it is founded upon more general rules and the combination of ſeveral proportions.

The three Grecian orders as afterwards eſtabliſhed, ſeem as if they were intended to repreſent three manners of building, the ſtrong, the mean, and the delicate. Many ſtructures have been and can be made without columns, perhaps only with a cornice, or ſome part of an entablature: Edifices of ſuch a conſtruction are called after the order, whereof they bear any of the ſpecial marks; thus the front of the Farneſe palace at Rome is quite plain, but finiſhes with a Corinthian Cornice; therefore ſuch a front is called Corinthian, and ſo of others.

(*a*) Architectura autem conſtat ex ordinatione, quæ Græcè, taxis dicitur, & ex diſpoſitione, hanc autem Græci diatheſin vocant, Eurythmia & ſymmetria & decore & diſtributione, quæ Græce œconomia dicitur.

b Ordinatio eſt modica membrorum operis commoditas ſeparatim, univerſæque proportionis ad ſymmetriam comparatio. Lib I. c. 2.

(*c*) Ita una quæque res & Locum & Genus & Ordinem proprium tuetur, e quibus rebus & a materiatura fabrili, in lapideis & marmoreis ædium ſacrarum ædificationibus artifices diſpoſitiones eorum ſcalpturis ſunt imitati, & eas inventiones perſequendas putaverunt: ideo quod antiqui fabri quodam in loco ædificantes, cum ita ab interioribus parietibus ad extremas partes tigna prominentia habuiſſent collocata, intertignia ſtruxerunt, ſupraque coronas & faſtigia venuſtiore ſpecie fabrilibus operibus ornaverunt. *Lib. IV. c. 2.*

It

It has been imagined, that the firſt architects conceived their ideas of the different characters of the columns by contemplating the (*d*) human figure; From a ſtrong muſcular man of athletic form they adopted the ſolidity (*e*) of the Doric. The graceful Ionic was ſuggeſted by the elegant figure of a decent (*f*) matron, and the delicate Corinthian, by the gay perſon of a chearful (*g*) virgin. The different capitals and baſes have been thought, in ſome meaſure, to repreſent the dreſſes of their heads and feet, agreeably to their notion who firſt ſtruck out theſe alluſions.

The three orders delineated under equal heights, but of unequal diameters, will at firſt ſight exhibit, by the different diameters of the columns, the different degrees of ſolidity that may be allowed to buildings of equal given heights; theſe do not readily occur, when, as hath been done by moſt authors, the orders are traced out of unequal heights but of equal diameters.

It may often happen that columns of unequal altitudes, without comparing their characters, are employed in the ſame front; for example, the greater order may be Corinthian, or any other, and the dreſſings for doors and windows, with columns of another mode; ſome modern authors have objected to this uſe of different ſized columns in the ſame front, but it is juſtifiable from the nature of things, (the compariſons ceaſing) and from examples in the antique; trees of the larger growth may be ſuppoſed to prop up the roof, and others of leſſer ſize may be interpoſed to ſuſtain the different floors or contignations of an edifice, while the ſmalleſt may be uſed about the windows and doors: when all theſe ſeveral diviſions are finely proportioned, the columns aſſigned to each will likewiſe bear a juſt relation, in their ſeveral diſtributions, to the whole. If the height of a column with its entablature, was to be conſidered as the intended height of a wall, the diameter of the column would give the moſt ſuitable thickneſs according to the order choſen for this purpoſe; the thickneſs of the wall might be taken, as the nature of the caſe required, of the greater, the mean, or the leſs ſolidity. The height and thickneſs of a wall having been fixed by the altitude and diameter of an order, the ſame altitude may be taken to give one ſide of a cube, wherein height, length and breadth, the three requiſite dimenſions of an edifice, will be found: thus will an order aſſiſt us to determine the firſt and moſt ſimple deſign of a plan and its elevation. How theſe dimenſions may afterwards be diverſified, diminiſhed or enlarged, ſtill under the influence of the orders, will be readily comprehended by thoſe who have made theſe matters the ſubject of their careful diſquiſitions.

PLATE I.

(*b*) Repreſents the plans, elevations and profiles of the three modes or orders of (*i*) columns A, B, C, of unequal diameters included under equal heights, for the conſiderations as abovementioned; to compare at one view, the ſtrong, the mean and the delicate; but for this purpoſe it is alſo further neceſſary to give a method of finding the reſpective modulary diviſions, by which *ex ratione modulationis*, the orders are traced and compared, of whatſoever magnitude may be required.

(*d*) Et quærentes quibus rationibus efficere poſſent uti et ad onus ferendum eſſent idoneæ, & in aſpectu probatam haberent venuſtatem: dimenſi ſunt virilis pedis veſtigium, & cum inveniſſent pedem ſextam partem eſſe altitudinis in homine ita in columnam tranſtulerunt.

(*e*) Ita dorica columna virilis corporis proportionem & firmitatem et venuſtatem in ædificiis præſtare cæpit. Lib. IV. c. 1.

(*f*) Ita duobus diſcriminibus columnarum inventionem, unam ſine ornatu nudam ſpecie, alteram muliebri ſubtilitate et ornatu ſymmetriaque ſunt imitati. Id autem genus quod Ions, primo Ionicum eſt nominatum. Lib. IV. c. 1.

(*g*) Tertium vero quod Corinthium dicitur, virginalis habet gracilitatis imitationem: quod virgines propter ætatis teneritatem gracilioribus membris figuratæ; effectus recipiunt in ornatu venuſtiores. Lib. IV. c. 1.

(*h*) Diſpoſitio autem eſt rerum apta collocatio, eleganſque in compoſitionibus effectus operis cum qualitate. Species diſpoſitionis quæ Græcè dicuntur ideai, hæ ſunt, Ichnographia, Orthographia et Scenographia. Ichnographia eſt circini regulæque modicè continens uſus ex qua capiuntur formarum in ſolis arearum deſcriptiones. Orthographia eſt autem erecta frontis imago, modiceque picta rationibus operis futuri figuræ. Item Scenographia eſt, frontis et laterum abſcedentium adumbratio, ad circinique centrum omnium linearum reſponſus. Lib. I. c. 2.

(*i*) E Columnarum enim formationibus, trium generum facta ſunt nominationes, Dorica, Ionica, Corinthia. Lib. IV. c. 1.

The architectonic module, is never taken for a fixed meaſure like the foot, the yard, the fathom, &c. it ever varieth as the work is greater or leſs, and is divided differently for different orders. To find the (*a*) module for any deſign, the given heights muſt in the firſt place be divided as follows.

For the Doric order A, divide the given height into eight equal parts, one of which will anſwer to the diameter of the column.

The height for the Ionic order B, is divided into ten equal parts, and one of them is taken for the diameter of the column.

Divide the ſame given height for the Corinthian order C into twelve equal parts, and take one of theſe in like manner for the diameter of the column.

By moſt authors the diameter of a column is taken for one module, and is divided into ſixty equal parts, called minutes; but the diviſions uſed by Vignola will be applied in the courſe of this work, for, being in lower terms, they more diſtinctly expreſs the relations which the ſeveral diviſions and members have one with the other.

Again, by this method of dividing, it may frequently happen that the modules and their diviſions of the intended work may anſwer to feet, inches, and parts of inches, as they are ſet on the common rulers of the artificers.

For the Doric order the ſemidiameter gives one module, and is divided into twelve equal parts, each part may be again ſubdivided. For the Ionic order, the module or ſemidiameter is divided into eighteen equal parts, and each part may again be ſubdivided. For the Corinthian order, the module or ſemidiameter is like the preceding, divided into eighteen equal parts, and each part may be again ſubdivided.

To delineate the orders, it is always previouſly neceſſary to make a modulary ſcale: there are two methods of doing this, the one and the other is uſed indifferently. The firſt is called a ſcale ſimply divided, the other a ſcale diagonally divided; the laſt is to be uſed preferably to the firſt, becauſe the ſeveral meaſures can be taken with more certainty.

I. For the ſcale ſimply divided: draw three indefinite parallel lines at unequal diſtances, and ſet off A. 1. the ſemidiameter of the intended column for one module, which may be repeated upon the ſame lines as often as may ſeem neceſſary; then divide A. 1. into twelve equal parts for the Doric order, but for the Ionic or Corinthian order, divide the module into eighteen equal parts. See fig. 1. B.

II. For a ſcale diagonally divided. 1. Upon an indefinite right line ſet off A. B. equal to the ſemidiameter of the column, and for the Doric order divide it into twelve equal parts. 2. At the point A. raiſe the perpendicular A. C. equal to A. B. and divide it in the ſame manner into twelve equal parts. 3. From each point of diviſion in A. C. draw parallels to A. B. which are to be determined by another perpendicular raiſed at the point B. 4. Draw the twelve diagonals A. 1. &c. parallel to each other, and mark the diviſions upon A. B. from 2 to 12, and on the ſide ſet the figures 4, 8; by this operation, the Doric module is divided into twelve equal parts, and each part is again divided into other twelve equal parts. Three of theſe parts of parts are contained between O. O. and are equal to one fourth of one of the primary parts, or to one forty-eighth part of the module. Between X. X. are contained ſix parts of parts, equal to one half of one of the primary parts, or to the twenty-fourth part of the module. This is ſufficient to explain the nature of the diviſions upon a Doric diagonal ſcale.

(*a*) Hæc (ordinatio) componitur ex quantitate quæ Græce Poſotes dicitur. Quantitas autem eſt modulorum ex ipſius operis, ſumptione, ſingulíſque membrorum partibus univerſi operis conveniens effectus. Lib. I. c. 2.

For

For the Ionic and Corinthian diagonal ſcales, the module muſt be divided into eighteen equal parts, taking the line B. D. as the ſemidiameter of the column; then ſet down the numbers 6, 12, 18, underneath their reſpective diagonal diviſions, and to the perpendicular raiſed at the point D. the numbers 6, 12, againſt their proper parallels, and here obſerve, that each primary part is divided into eighteen parts of parts, and that conſequently three hundred and twenty-four parts of parts are equal to the module.

Beſides theſe ſcales of modules uſed in delineating any architectural deſign, there is another method for determining the diviſions of the members, which is more convenient, becauſe it avoids all fractions of parts, and the ſums of the ſeveral quantities aſſigned are equal to the whole. It is done by repeated equal diviſions, without any regard to the minutes or parts of a module. For example: The Attic baſe may have its altitude divided into three equal parts, and one of theſe is given to the plinth; then again divide the ſame entire height into four, and one of theſe determines the height of the great torus. Again, divide the entire height into ſix equal parts, and one of theſe is taken for the leſſer torus. The remaining interval is equal to the great torus; this divide into ſix equal parts, of which, one being aſſigned to each fillet, the four intermediate ones will remain for the ſcotia. This method has been much practiſed by the modern artiſts, and it was likewiſe uſed by the ancients; it is very ingenious, and will aſcertain very preciſely and diſtinctly the relative meaſures of all the parts thus ſubdivided. Yet the greater conſtituent members of the orders ſhould firſt be determined and traced from their reſpective modulary ſcales.

The following table contains the greater diviſions; the diſtribution obſervable therein is, that the ſtrongeſt column is charged with the heavieſt entablature, according to the true reaſon of things.

ALTITUDES.		Doric Mod. p.	Ionic Mod. p.	Corinth. Mod. p.
Entire Order.		16 : 0	20 : 0	24 : 0
Columns.	Baſe of the column - -	0 : 0	1 : 0	1 : 0
	Shafts with fillets and aſtrag	11 : 10	13 : 13	16 : 3
	Capital - - - - - -	0 : 8	1 : 8	2 : 6
	Total heights	12 : 6	16 : 0	19 : 9
Entablatures.	Architrave - - - - -	1 : 2	1 : 9	1 : 9
	Frize - - - - - -	1 : 4	1 : 9	1 : 6
	Cornice - - - - - -	1 : 0	1 : 0	1 : 12
	Total heights	3 : 6	4 : 0	4 : 9

Add the total height of the members of the columns to the total height of the members of the entablature, and the ſums will give the altitudes of the entire orders.

On ſome occaſions the Corinthian entablature may include only four modules, or two diameters in height; and then to the architrave is given one module ſix parts, to the frize one module three parts, and to the cornice one module nine parts. The artiſt ſhould always be able to judge upon the ſpot when theſe or any ſuch chromatic differences may take place.

Having a given perpendicular line for the axis of the column, you may ſet off from a ſcale of modules, the different altitudes as marked down for the intended order in the above table. In the next table are given to be taken from the ſame ſcale, the diameters of the column at top and bottom, the projectures of its baſe and capital, and of the principal members of its entablature; as to other particulars relating to the mouldings, &c. they will be ſupplied in the courſe of our remarks.

PROJECTURES.

PROJECTURES.	Doric Mod. p.	Ionic Mod. p.	Corinth. Mod. p.
Diameter of the ſhaft at bottom - -	2 : 0	2 : 0	2 : 0
Diameter at the top - - - - - -	1 : 8	1 : 13	1 : 13
Baſe of column on each ſide - -	0 : 0	0 : 7½	0 : 7½
The apophyge at bottom - - -	0 : 0	0 : 1	0 : 1½
Abacus of the capital beyond the col.	0 : 3	0 : 5	0 : 11
Front of each Ionic volute - - -	0 : 0	0 : 13	0 : 0
Mouldings of the architrave - - -	0 : 1	0 : 3	0 : 5
Frize as well as the arthitrave coincide	- : -	- : -	- : -
with the diminution of the Column	- : -	- : -	- : -
Cornice to project beyond the frize	1 : 6	1 : 9	1 : 12

The plans of columns are invariably circular; all others have been condemned as abſurd. Pilaſters have ſquare plans equal to the diameter of columns; theſe are placed behind, or on the ſide of columns, and generally have the ſame diminution; for as columns ſtand with more firmneſs and ſolidity when their lower parts are broader than their upper, and ſuch a form is obſervable in the trunks of trees, they were on both theſe accounts allowed the figure of a truncated cone: hence we may infer, that every building ſhould have its baſis larger than its ſuperior parts.

A column, as noted in the table of Altitudes, is compoſed of three principal members. 1. The foot or baſe. 2. The ſuſt or ſhaft. 3. The capital. The entablature alſo contains three diſtinct members. 1. The epiſtyle (*a*) or architrave, repreſenting the beam laid acroſs the tops of the columns, or the beam for the wall-plate. 2. The *zophorus* or frize, being the ſpace left for the joiſts. 3. The corona or cornice, that repreſents the ends of the rafters and the eave-boards in a . The cornice ſhould always project ſufficiently to preſerve all the parts underneath from the ippings of rain. Theſe three are the great conſtituent members, and ſhould never be mutilated or omitted in any deſign intended to diſplay the beauties of the art.

PLATE II.

The mouldings are little jettings or projectures upon the naked of a wall, or of any other ſurface, as of the ſeveral greater conſtituent members of an order. This general name is given them, becauſe they appear to have been caſt in a mould, as indeed all of metal are; the others being

(*a*) Epiſtyliorum ratio ſic eſt habenda uti ſi columnæ fuerint a minimo XII pedum ad XV pedes, epiſtylii ſit altitudo dimidia craſſitudinis imæ columnæ. Item ſi a XV pedibus ad XX, columnæ altitudo dimetiatur in partes XIII & unius partis altitudo epiſtylii fiat. Item ſi a XX ad XXV pedes dividatur altitudo in partes XIIS & ejus una pars epiſtylium in altitudine fiat. Item ſi a XXV pedibus ad XXX dividatur in partes duodecim & ejus una pars altitudo fiat. Item ſecundum ratam partem ad eundem modum ex altitudine columnarum expediendæ ſunt altitudines epiſtyliorum. Quo enim altius oculi ſcandit acies, non facile perſecat aeris crebritatem: dilapſa itaque altitudinis ſpatio & viribus extrita, incertam modulorum renuntiat ſenſibus quantitatem. Quare ſemper adjiciendum eſt rationis ſupplementum in ſymmetriarum membris, ut cum fuerint in altioribus locis opera, aut etiam ipſa coloſſicoetera, certam habeant magnitudinum rationem. Epiſtylii latitudo in imo quæ ſupra capitulum erit, quanta craſſitudo ſummæ columnæ ſub capitulo erit tanta fiat; ſummum quantum imus ſcapus. Cymatium epiſtylii ſeptima parte ſuæ altitudinis eſt faciendum & in projectura tantundem: reliqua pars præter cymatium dividenda in partes XII & earum trium prima faſcia eſt faciendа, ſecunda quatuor, ſumma quinque. Item zophorus ſupra epiſtylium, quarta parte minus quam epiſtylium, ubi autoritatem habeant ſcalpturæ. Cymatium ſuæ altitudinis partis ſeptimæ, projectura cymatii quanta ejus craſſitudo. Supra zophorum denticulus eſt faciendus tam altus quam epiſtylii media faſcia, projectura ejus quantum altitudo. Interſectio quæ Græce Metochè dicitur, ſic eſt dividenda: uti denticulus altitudinis ſuæ dimidiam partem habeat in fronte. Cavus autem interſectionis hujus frontis è tribus duas latitudinis partes habeat: hujus cymatium, ejus altitudinis ſextam partem. Corona cum ſuo cymatio præter ſimam, quantum media faſcia epiſtylii. Projectura coronæ cum denticulo facienda eſt quantum erit altitudo zophoro ad ſummum coronæ cymatium: & omnino omnes ecphoræ venuſtiorem habent ſpeciem quæ quantum altitudinis tantundem habeant projecturæ. Lib. III. c. 3.

cut

cut with chiſſels, &c. upon the raiſed parts of the wood, ſtone, or marble, left for that purpoſe.

Some mouldings are flat, either ſquare or bevel; others are curvilinear or mixt. The flat mouldings take their names from their ſize and ſituation. The curve mouldings are either convex or concave, or convex-concave. The convexity and concavity is traced for ſome by greater or leſſer ſegments of a circle; but elliptical figures are moſtly uſed, according to the Grecian taſte; and it is ſeldom that the projectures of any are equal to their heights, generally leſs, as 2 to 3, 3 to 4, 5 to 6.

Mouldings are either ornamented or plain; ſome of the many ornaments adapted to each, are here repreſented: Since mouldings do, as it were, compoſe the alphabet of architecture, and that without a perfect knowledge of their ſeveral diſtributions and combinations, it is impoſſible to acquire any proficiency, their uſes and ſhapes ſhould be well conſidered: to avoid any miſtakes about their names, they are ſet down both as they are found in authors, and as they are called by workmen.

The mouldings in this plate are all deſigned ſeparately, and without a ſcale, becauſe their magnitudes depend upon the proportions allotted to them in their reſpective places of an order.

LATIN and ITALIAN Names in Authors.	ENGLISH Names by Artificers.
A. *Tænia. quadra. cimbia. orlo.*	A. Fillet, ſtring, liſt, ornamented with ſcrolls.
	a. The bevel fillet often uſed underneath the former.
B. *Abacus. plinthus. faſcia.*	B. Plinth, platband, facia, with fret.
C. *Aſtragalus. tondino.*	C. Aſtragal, bead cut into beads.
	d. a bead cut upon a ſquare edge.
D. *Torus minor. baſtone.*	D. Upper or leſſer torus, with reeds and ribbons.
E. *Torus. toro.*	E. Greater or lower torus, with leaves and acorns.
F. *Torus ovatus. toro ovale.*	F. A boultin or elliptical torus, with huſks and ſtalks. This member placed with its projecture upwards, may ſuit the cornice or capital. With its projecture downwards, f. it ſuits a baſe.
G. *Echinus. ovolo.*	G. Eggs and anchors.
H. *Trochylus. Scozia.*	H. Scotia, or hollow, with ſtalks and flowers.
I. *Cymatium. ſinus. cavetto.*	I. Quarter round, hollow, with leaves and flowers.
K. *Cyma recta. ſima lyſis. ſinus. gola dritta.*	K. Ogee, with water leaves.
L. *Cymatium leſbium. liſis ſinus. cyma reverſa. gola roveſcia.*	L. Ogee reverſed, with lace-work.
M. *Corona. gocciolatoio.*	M. Drip with channels; in Vitruvius *corona* is the ſpecial name of the drip, and the general name for the whole cornice.
N. *Apophygis. apoſigio.* The upper apophyge in the ſhaft of a column is directly againſt that part called the neck, and by Vitruvius, the *hypotrachelion* of the column.	N. Congee, or little hollow, that ſerves for one member to riſe from, or fall into another, like the cincture fillets at top and at bottom of the ſhaft of a column. The cincture fillets are in imitation of the iron hoops that were placed round the extremities of wooden columns, to prevent their ſplitting.

O. P. Q. R. Four facias with different ornaments of braided and twiſted ribbons, flowers, ſtalks, fiſhes, ſhells, &c. The inſpection of the figures clearly ſheweth how they are all delineated.

All the members are adapted to the Cornice and to the capital, excepting the torus and the ſcotia; and they may all ſuit the baſe, excepting the echinus or ovolo; the reaſon of this is, that the projecture always enlarges upwards in cornices and capitals. Such members then are ſuitable to theſe parts, whoſe projectures increaſe as they riſe, and above which may be added others ſtill to project beyond them. Now all mouldings will have this effect except the torus and the ſcotia, (ſee their figures) for, ſince any member placed upon the torus muſt take its riſe or proceſs from the line which forms the chord of the circular ſegment, and when added to the ſcotia, muſt iſſue from the uppermoſt point of its concavity, neither the one or the other will admit of a member that projects, therefore neither the torus or the ſcotia are fit to be placed in ſuch ſituations.

The projecture of the baſe of a column or a pilaſter, and of a pedeſtal, always enlarges downwards; conſequently, any of the mouldings, whoſe projectures likewiſe enlarge downwards may be applied to both theſe parts. The cima-recta and cima-reverſa, when topſy-turvy, may be here applied, and in theſe caſes a torus ſhould be always uſed, inſtead of the echinus or ovolo; ſo that this one excepted, (unleſs turned upſide down) every other member will ſuit the baſe of a column, of a pilaſter, of a pedeſtal.

The ornaments of ſculpture invented to enrich the different mouldings, are various and numerous: we have deſigned ſome few, but as the ſtile of architecture ſhould be decided by the deſtination of the edifice, ornaments (*a*) ought to be placed ſo judiciouſly, that they may do honour to the taſte of the architect, and indicate the uſe for which the building is raiſed. Some ornaments, as ribbons, foliages, eggs, &c. are indifferent and equally applicable to all; others are ſignificative, being the mere inſigns of peculiar alluſions; as inſtruments of ſacrifice, ox-ſkulls, &c. only proper for the decoration of an antique temple, are improperly placed elſewhere, being no characteriſtic of the order; trophies, ſacred or prophane ſymbols, hiſtorical ſubjects in baſſo relievo, ſhould be introduced with propriety and ſimplicity, (for ſimplicity is always the attendant of genuine grace,) in ſuch a manner, as to declare at once the title of the edifice by ſome of its parts.

The moſt general rule is, that the mouldings be alternately carved or plain, that the plainneſs of thoſe which ſeparate the wrought ones, may afford a repoſe and harmony grateful to the ſpectator's eye. All the ornaments ſhould riſe in diviſions perpendicular, one over the other, the greater, as the modilions, &c. ſhould regulate the leſſer; they ſhould, above all, ſuit the order whereto they may be applied; the richeſt and moſt delicate workmanſhip is never beſtowed but upon the Corinthian. All the parts in the ſame front ſhould be proportionably adorned, not to leave ſome quite naked, while others are enriched with profuſion. If the corona or drip hath any carving upon it, the cyma recta is left plain, and ſo vicê verſâ: archivolts and arichtraves are left plain, excepting when the utmoſt richneſs of workmanſhip is requiſite: as for altar-pieces, royal galleries, or chambers of the greateſt magnificence, in theſe all the members may be carved, leaving here and there a plain fillet to avoid confuſion. The frize may be adorned with hiſtorical or emblematical ſubjects, being careful not to mix together ſacred and prophane deſigns. The profile of the members uſed for the inſide, ſhould have leſs projecture than thoſe without, and the ſculptures be kept in bas relief, for too much roundneſs would give an appearance of heavineſs to the whole work.

Three methods may be taken to enrich the orders. 1. By the deſign and execution of the Sculpture. 2. By the richneſs of the materials. and, 3. By uniting the richneſs of materials

(*a*) Quod multa ornamenta ſæpe in operibus architecti deſignant, de quibus argumentis rationem, cur fecerint quærentibus reddere debent. Lib. I. c. 1.

and

and nicety of workmanſhip. The moſt choice materials are the fine marbles, ivory, and metals gilt, tho' it is but very ſeldom that the eſtimates will afford theſe expences. The churches and palaces of Rome furniſh many inſtances of a profuſion of ſuch magnificence. The different colours of marbles muſt be judiciouſly ſorted to harmonize together, and being heightened by the gildings of the parts made of bronze, ſuch as the baſes, capitals, modilions, &c. produce the moſt ſtriking effects.

The expence of bronze metal is conſiderable, but it is preferable to all others for theſe uſes. Wood takes the gold very well, but is liable to rot from the moiſture of the marble: lead is not expoſed to the ſame accident, but the gilding beſtowed upon it is always very dull.

The outline of any one moulding, or of ſeveral taken together, as the entire cornice of an order, is called the profile; the ſemicircle is the profile of the torus; a perpendicular line is that of the plinth: a ſection or ſawing thorough any number of mouldings, gives their true delineation. The art of delineating profiles is a *moſt neceſſary talent for excelling* in architecture; becauſe, the ſame artiſt who may ſucceed well in the diſtribution of a plan, and in a fine compoſition for an elevation, may at laſt obſcure the merit of his work by the bad effect of his profiles. The antiquities of Rome furniſh examples of ſeveral, which are bolder than they are correct; the ſame may be ſaid of Michael Angelo's. The moſt elegant profiles are the leaſt charged with mouldings, and have not an unmeaning repetition of the ſame kind, but contain alternately a mixture of curvilinear and ſquare ones; and above all, the ſmaller ones are introduced between the greater, that by ſuch a ſtriking oppoſition, the effect may be more pleaſing. The projecture of the profile muſt alſo be proportioned to its height, regard being had to the body whereon it is immediately placed; and it is to be obſerved, that ſome great moulding ſhould predominate in the profile of a principal member, as the drip or corona in the cornice, whereof it is a moſt eſſential part. It is ſurprizing that the corona has been omitted in ſome works of great reputation, as in the Temple of Peace at Rome. (See Palladio, Lib. IV.) The equality of heights of mouldings in the ſame profile ſhould be carefully avoided. When a leſſer moulding is placed over another, it ſhould not be more than half, or leſs than one fourth of the moulding under it. Thus, the fillet upon the cima recta, and the aſtragal or bead under the ovolo, cannot be allowed leſs than one fourth, or more than one third of the cima recta or ovolo. The dentel is the higheſt of all the mouldings under the drip, and the drip a very little lower than the cima recta above it; the cima recta is too low, both in the external and internal orders of the Pantheon. See Palladio, Lib. IV. The cornices of the orders moſt frequently finiſh with a ſquare moulding or fillet juſt above the cima, but ſometimes with an additional circular moulding above the fillet. The pannels or boxes in the ſoffit between the two modilions ſhould always be ſquare, as well as the intervals wherein they are placed, as will be further noticed in its proper chapter.

To make a good choice of profiles, neither drawings nor books can give ſufficient intelligence; becauſe a profile that yields a fine effect in one ſituation, will not anſwer in another. A frequent compariſon of profiles in different edifices is the ſureſt means of acquiring a good manner. Palladio, Scamozzi, and Vignola, of the moderns, have excelled in this branch, but the Athenian antiquities furniſh an elegant variety unknown to them. The artiſt who would ſurpaſs in this point, ſhould not always delineate profiles with a ruler and compaſſes, he ſhould often ſketch them by hand upon a very large ſcale, and this practice will be found not altogether unneceſſary and uſeleſs.

Whatever care the Gothic architects have taken to render the execution of their works perfect, the diſagreeable figures they combined for their mouldings, have ſtamped upon them all the marks of barbariſm; theſe deformities become more ſenſible, when compared with examples of the antique, which are amazingly beautiful, by the elegance, the variety, the choice and ſimplicity of the mouldings that compoſe the Grecian profiles.

CHAP.

CHAP. III.

Daviler's Compariſon of Profiles. Intercolumniations. Diminution of the Shaft. Scroll Modilion. Baluſters. Pediment, Acroteria, and Statues. Block Cornices. Vaſes.

DAVILER gives four examples of entablatures, in order to ſhew the manner of comparing profiles, and thence to make a good choice; two of which are antique, and two modern.

PLATE III.

The profile A. is from the temple of Fortuna Virilis at Rome, very ancient indeed, as it is ſaid to have been built in the time of their kings. Now, without conſidering to what order it belongs, which is not the queſtion at preſent, but examining it entirely by itſelf, we ſhall find that the three parts which compoſe this entablature, bear no true relative proportion one to the other; the frize is no more than two fifths of the height of the cornice, and only two thirds of the height of the architrave, and the cornice contains above one half of the height of the entire entablature: the drip or corona is not half of the cima recta, and the cima reverſa between theſe two members, is almoſt as high as the corona; that each dentel is very near ſquare, and exceeds the height of the corona; that the three faſcias of the architrave are nearly equal: the fillet upon the uppermoſt, is almoſt as deep as the cima reverſa under it. The olives and pearls carved on the naked of the middle faſcia, have a very bad effect, being quite out of place.

The ſecond entablature B. is taken from the baths of Diocletian; here we may obſerve the architrave to be higher than the frize, which is without ornament and pulvinated, and the cornice higher than the architrave, as it ſhould be: the projecture of this cornice is equal to its height. Vignola has imitated this profile on account of its beautiful parts, for none of the faults of the former appear in this deſign.

The profile of the third C. is after Palladio, and is well choſen. The modilions are introduced in imitation of thoſe in the cornice of the temple of Concord, and of another ruin near St. Hadrian's church, mentioned by Serlio.

The fourth example D. is after Serlio, who imagining to adhere to the preſcriptions of Vitruvius, for the Ionic entablature, has fallen into a littleneſs not allowable. The cornice is low and mean, being compoſed altogether of diminutive, confuſed mouldings, almoſt impereeptible. The fillet upon the cima recta is by half too low, ſo are all the other fillets; the dentels are poorly crowned, and but weakly ſupported underneath; and the noſe or beak in the drip or corona, is too weak.

In this ſame plate are traced out the five Grecian intercolumniations. By intercolumniation is underſtood the ſpace or diſtance that is left between one column and another. Theſe are the names of the five, and the meaſures preſcribed to the intervals.

The Pycnoſtyle diſpoſeth columns very near each other, being only one diameter and a half between ſhaft and ſhaft.

The

The (*a*) Syſtyle placed the columns at two diameters diſtant.

The (*b*) Diaſtyle fixed columns at an interval of three diameters.

The fourth was called (*c*) Araeoſtyle, and the columns were diſpoſed with an interval of four diameters. In this intercolumniation they were obliged to make the architraves of wooden beams; therefore, becauſe of the difficulty of executing it in ſtone, and the ill appearance ſo great a diſtance between the columns produced, it was never approved.

The (*d*) Euſtyle ſurpaſſeth all others, on which account it was thus named. The intercolumniation herein given is two diameters and one fourth, obſerving however that the middle intercolumniation in the fore and back fronts, was allowed three diameters, to allow a freer acceſs to the door way.

But the height (*e*) of columns, as well as their diameters, is to be conſidered in intercolumniations. To the (*f*) narroweſt intervals are placed the moſt ſlender columns, and to the wider openings, the thickeſt and ſhorteſt columns: yet theſe rules have always had their exceptions; the Ionic and Corinthian columns having been diſpoſed in moſt works with as wide intervals as the Doric; and this again has been placed with the narrow intervals ſuitable to both the former modes: when one order is placed above another, the uppermoſt has its intercolumniation wider than the inferior one. The practice, recommended by Vitruvius, is as follows.

For the araeoſtyle, let the height of the columns not exceed eight times its diameter. This is applicable to the Doric.

For the diaſtyle and euſtyle, the height of the columns is allowed eight diameters and a half. This may ſuit the Ionic.

(*a*) Hæc utraque genera (pycnoſtylos & ſyſtylos) vitioſum habent uſum, matres enim familiarum cum ad ſupplicationem aſcendunt, non poſſunt per intercolumnia amplexæ adire, niſi ordines fecerint. Item valvarum aſpectus obſtruitur columnarum crebritate, ipſa que ſigna obſcurantur. Item circa ædem propter anguſtias, impediuntur ambulationes. Lib. III. c. 2.

(*b*) Hæc diſpoſitio hanc habet difficultatem, quod epiſtylia propter intervallorum magnitudinem franguntur. Lib. III. c. 2.

(*c*) In araeoſtylis autem nec lapideis nec marmoris epiſtyliis uti datur ſed imponendæ de materia trabes perpetuæ; & ipſarum ædium ſpecies ſunt barycæ, baricephalæ, humiles, latæ. Lib. III. c. 2.

(*d*) Euſtyli ratio quæ maxime probabilis & ad uſum & ad ſpeciem & ad firmitatem rationes habet explicatas:—ſic enim habebit & figurationis aſpectum venuſtum & aditus uſum ſine impeditionibus, & circa cellam ambulatio autoritatem. Lib. III. c. 2.

(*e*) Ita ex ea diviſione intercolumnia, altitudineſque columnarum habebunt juſtam rationem. Lib. III. c. 2.

(*f*) Quemadmodum enim creſcunt ſpatia inter columnas, ita proportionibus adaugendæ ſunt craſſitudines ſcaporum. Namque ſi in araeoſtylo, nona aut decima pars craſſitudinis fuerit, tenuis & exilis apparebit. Ideo quod per latitudinem intercolumniorum aër conſumit & imminuit aſpectus ſcaporum craſſitudinem. Contra vero pycnoſtylis ſi octava pars craſſitudinis fuerit, propter crebritatem & anguſtias intercolumniorum, tumidam & invenuſtam efficiet ſpeciem. Itaque generis operis oportet perſequi ſymmetrias. Etiamque angulares columnæ craſſiores faciendæ ex ſuo diametro quinquageſima parte, quod eæ ab aëre circumduntur & graciliores videntur aſpicientibus. Ergo quod oculos fallit, ratiocinatione eſt exequendum. Contracturæ autem in ſummis columnarum hypotracheliis ita facienda videntur, uti ſi columna ſit ab minimo ad pedes quinos denos ima craſſitudo dividatur in partes ſex & earum partium quinque ſumma conſtituatur. Item quæ erit ab quindecim pedibus ad pedes viginti, ſcapus imus in partes ſex & ſemiſſem dividatur, ex earumque partium quinque & ſemiſſe ſuperior craſſitudo columnæ fiat. Item quæ erit a pedibus viginti ad pedes triginta ſcapus imus dividatur in partes ſeptem earumque ſex ſumma contractura perficiatur. Quæ autem ab triginta ad quadraginta altæ, ima craſſitudo dividatur in partes ſeptem & dimidiam, ex his ſex & dimidiam in ſummo habeat contracturæ rationem. Quæ erunt a XL ad L item dividendæ ſunt in octo partes & earum ſeptem in ſummo ſcapi hypotrachelio contrahantur. Item ſi quæ altiores erunt his eadem ratione pro rata conſtituantur contracturæ. Hæ autem propter altitudinis intervallum ſcandentis oculi ſpeciem fallunt; quamobrem craſſitudinibus temperaturæ. Venuſtatem enim perſequitur viſus; cujus ſi non blandimur voluptati pro ratione & modulorum adjectionibus, uti id in quo fallitur temperatione adaugeatur, vaſcus & invenuſtus conſpicientibus remittetur aſpectus. De adjectione quæ adjicitur in mediis columnis quæ apud Græcos entaſis appellatur, in extremo libro erit formata ratio ejus, quemadmodum mollis & convenienſ efficiatur. Lib. III. c. 2.

The ſyſtyle may have the height of its columns nine diameters and a half.

In the pycnoſtyle the columns are preſcribed at ten diameters in height. Theſe two laſt intercolumniations are adapted to the Corinthian.

The reaſon of theſe different proportions is, becauſe the free paſſage of air between the intervals of columns, doth as it were conſume and diminiſh the thickneſs of columns, and the more air and light do ſurround them, the more ſlender do columns appear; therefore the angular columns have been allowed to have their diameters increaſed one fiftieth part more than the intervening ones.

The wider intercolumniations will admit of columns being diſpoſed by couplets; they are then placed two by two with ſufficient ſpaces for the projectures of their capitals and baſes; and regard alſo muſt be had to the triglyphs, mutules, dentels, and modilions of their reſpective cornices. By this diſpoſition of couplets, the angles of a building ſeem to be greatly ſtrengthened; but it gives a crowded and irregular aſpect in the center of an edifice.

Columns in the fore and back front are generally diſpoſed in an even number, otherwiſe the middle of the front would preſent a column inſtead of a vacuity for a door-way, and then it would require two door-ways; beſides, the architrave conſidered as a beam with a weight ſuſpended in its middle, *i. e.* the center of gravity, demands the ſame number of men (their ſtrength ſuppoſed to be equal) on one ſide as on the other to bear it up.

The diminution of the ſhafts of columns upwards, gives a gracefulneſs to their forms, which otherwiſe they would want. But the ſwelling in the middle can convey no other idea than that of the columns being oppreſſed by the incumbent weight. The remains of antiquity cannot furniſh examples of the latter practice. Sir H. Wotton condemns it as a great abſurdity.

Some authors with Vitruvius, as above quoted, have decided, that columns of different altitudes require different diminutions, but to judge from the remains of antiquity, this precept ſeems not to have been ſcrupulouſly practiſed, for neither the very lofty columns of the temple of Fauſtina, nor thoſe of the portico of Septimius, of the temple of Concord, and of the baths of Diocletian, have more diminution than others of half their height, as thoſe of the triumphal arches of Titus, of Septimius, and of Conſtantine.

The different characters of the orders, have been judged to require different diminutions of their ſhafts; we find authority for this in the antiquities of Athens, which correſpond nearly with the rules eſtabliſhed by Scamozzi.

For the Doric column, the top of the ſhaft is four fifths of the diameter at bottom.

For the Ionic column, the diminution is one ſeventh.

For the Corinthian column, the ſhaft at top is ſeven-eighths of the diameter at bottom.

Vignola and others make the ſhafts of every order to diminiſh only one ſixth, and this general diminution may in common caſes be received with great propriety.

To begin the diminution from the bottom of the ſhaft, is the moſt natural and moſt approved, eſpecially for the Doric, but for the Ionic and Corinthian orders, the diminution may begin at one-third of the length of the ſhaft; it is thus traced for the column A. B. From the point E. deſcribe the ſemi-circle E. D. C. &c. from A. the point of diminution at-top, let fall the perpendicular A. G. divide the arch G. E. into ſeveral equal parts at pleaſure; *e. g.* into ſix, and raiſe ſo many perpendiculars, divide E. A. into the ſame equal number of parts, and through the points of interſection, E. H. L. K. L. M. A. trace the line that will give the ſurface

face of the diminiſhed column. The ſemicircle E. D. C. is deſcribed either at the bottom of the ſhaft, or at one-third of its height.

PLATE IV.

Fig. I. repreſents the figure of a ſcroll modilion, with half of its front.

* The ſecond internal cornice of the Tower of the Winds at Athens. It is remarkable for an ovolo above the cima, and for the ſituation of the dentels, and for the reverſed profile of the modilions. There are reverſed modilions in the cornice of *La Maiſon Quarrèe*, that beautiful antique temple at Niſmes in Languedoc. Palladio thinks the reverſing of the modilions is very graceful. See the deſign, Palladio Lib. IV.

Fig. II. The delineation of two ſtone baluſters (*columellæ*); this variety is ſufficient for the three orders. The ſtrongeſt being applicable to the Doric, and the other to the Ionic and Corinthian buildings. Several of theſe baluſters, of equal and uniform ſhapes placed near to each other, is called a baluſtrade; they are included within the height allowed to the die of a pedeſtal, whoſe cornice ſerves as their rail, and they have the ſame baſe with the pedeſtal. A baluſtrade is uſed on the ſides of a flight of ſtairs, or for balconies to windows, in order to give greater liberty and conveniency of proſpect. Theatres, Halls, Temples, Palaces, and other public, as well as private fabrics, have occaſion for galleries or balconies in different parts of their ſtructure. They are ſuppoſed to anſwer to the *podium, podia, & mæniana* of the ancients, and to the *poggiuolo* of the Italians; for whether a balcony is made with baluſters, or with a parapet wall, the intention is the ſame, they equally ſerve to reſt upon, or lean againſt. The lowermoſt ſeats next to the arena in amphitheatres being guarded by a parapet, as were alſo thoſe next to the orcheſtra in the theatres (which anſwer to the front rows of our boxes) were reſerved at all public ſhews for perſons of the higheſt quality and rank, as appears by a paſſage in Juvenal,

> ——————— *Generoſior & Marcellis*
> *Et Catulis, Pauliſque minoribus, & Fabiis &*
> *Omnibus ad podium ſpectantibus.*

And the Emperor alſo was uſed to place himſelf at the podium, according to Suetonius, in the life of Nero. *Toto podio ad aperto ſpectare conſueverat.*

Fig. III. repreſents half of a pediment. To deſcribe the declivity of it, divide A. B. into four equal parts and a half, (or the whole into nine equal parts) take upon the indefinite perpendicular, the diſtance between O. and P. equal to one of theſe, then draw a right line from P. to the lower corner of the drip, and the lines for the mouldings above this line parallel thereto from the ſeveral points in the profile: the triangular ſpace left below them is called the (*a*) tympan,

---

(*a*) Tympani autem, quod eſt in faſtigio, altitudo ſic eſt facienda ut frons coronæ ab extremis cymatiis tota demetiatur in partes novem, & ex eis una pars in medio cacumine tympani conſtituatur dum contra epiſtylia, columnarumque hypotrachelia ad perpendiculum reſpondeat. Coronæ quæ ſupra tympanum fiunt, æqualiter imis præter ſimas ſunt collocandæ: inſuper coronas ſimæ, quas Græci epitithides dicunt, faciendæ altiores octava parte coronarum altitudinis. Acroteria angularia tam alta quam tympanum medium. Mediana altiora octava parte, quam angularia. Membra omnia, quæ ſupra capitula columnarum ſunt futura, id eſt, epiſtylia, zophori, coronæ, tympana, faſtigia, acroteria inclinanda ſunt in frontis ſuæ cujuſque altitudinis parte XII. ideo quod, cum ſteterimus contra frontes, ab oculo lineæ duæ ſi extenſæ ſfuerint, & una tetigerit imam operis partem,

tympan, which for greater magnificence is often adorned with fine reliefs of ſculpture, the ſubject thereof being always choſen ſuitable to the edifice. The full extent of the pediment is ſupported by two, four, ſix, or a greater equal number of columns.

Pediments are placed at the extremities, or at the center of an edifice, where they become very ornamental, eſpecially if they coincide with the roof, otherwiſe the application of them becomes only a mockery. It muſt be noticed, that the cima recta for a pediment is occaſionally deſcribed as in this figure, from the oppoſite angles of two ſquares, that the raking cornice may miter with the level cornice that meets it.

The Acroteria are ſmall pedeſtals for ſtatues intended to be placed upon the Pediment; the middle acroterium is at the ſummit, the two others are at the extremities, one to each. To trace the lower acroteria, continue the ſhaft of the column upwards, as deſcribed by the dotted parallel lines in the figure; take s. u. for the determined height equal to s. t. the projecture of the cornice; but for the center acroterium, ſuppoſe B. q. the profile of the pediment, make r. q. equal as before to the projecture of the cornice, and, according to Vitruvius, it ſhould even exceed in height the lateral acroteria by one eighth part. Sometimes the upper parts of the acroteria are moulded into little cornices, whoſe heights may be one-fifth of their breadths.

Statues are made leſs, or equal to the life, or larger. When they are made very ſmall, they cannot be received (excepting on tablets) for external architectural decorations, and ſhould be reſerved for chambers. If they exceed the life more than twice, they become coloſſal, and are beſt placed upon pedeſtals in an open area of ſufficient ſpace. The queſtion then is, to determine the ſize of ſtatues for the acroteria, or to adorn the intercolumniations or niches within a portico, &c.

The ſuperior diameter of the ſhaft of the column, having preſcribed the breadth of the acroterium over it, will determine alſo the ſize of a ſtatue in an erect poſture, becauſe the ſtatue requires neither more nor leſs ſpace to ſtand upon than a circle, whereof the length of its foot is nearly half of the ſaid diameter, as is ſhewn by the traces of the feet marked out in the plot; the acroterium therefore cannot admit of a ſtatue taller than three times that diameter. This limitation for ſtatues will always adjuſt the true proportions they ſhould have with their reſpective columns. The ſtatues upon the top of St. Paul's are too enormous for the columns, but this objection would diſappear, if the ſame height that is divided into the two orders, had been aſſigned to one.

We have only conſidered ſingle pedeſtrian ſtatues, and theſe of the human figure; but it is eaſy from them to make a ſcale for the proportions of other animals, as well as to regulate the ſize of a group of different figures whenever it may be intended.

In order to view conveniently any objects placed on high, a certain diſtance from the baſe of the building is requiſite. The ſpectator ſtands very conveniently, when the viſual ray forms with the horizontal line an angle of 45 deg. but if the ſaid angle be increaſed to 70 deg. the ſpectator ſtands rather inconveniently; and ſhould this angle be increaſed ſtill more, the elevated ſituation of the objects is very inconvenient, and there is no looking up at them, without wringing one's neck.

Suppoſing then 45 deg. is the mean, and 70 deg. the extreme elevation that ſhould be allowed for the viſual rays in looking up at objects, 20 deg. will be the other extreme for the leaſt elevated ſituations, becauſe there is the ſame difference in deſcending from 45 deg. to 20 deg. as aſcending

---

tem, altera ſummam, quæ ſummam tetigerit, longior fiet. Ita quo longior viſus lineæ in ſuperiorem partem procedit, reſupinatam facit ejus ſpeciem. Cum autem (uti ſupra ſcriptum eſt) in fronte inclinata fuerint, tunc in aſpectu videbuntur eſſe ad perpendiculum & normam. Lib. III. c. 3.

from

from 45 deg. to 70 deg. it may then be concluded, that every part of architectural decoration ſuſceptible of height will appear too low, if viewed under 20 deg. and too elevated if the viſual ray exceeds 70 deg.

Having conſidered the moſt convenient ſituation for viewing the high parts of a building, let us offer the proper point to place the ſpectator, that he may ſee to the beſt advantage the whole range of any conſiderable front of what extent ſoever; this diſtance is the ſummit of an equilateral triangle, the baſe of which is the front in queſtion.

When a building extends five or ſix hundred feet, the depth is not conſidered as a neceſſary proportion. The extent of length muſt be divided into ſeveral diſtinct breakings, as the ſquare of its height, ſquare and half, &c. without which, no ſuch deſign can ever appear beautiful, each muſt corrreſpond with the whole, and yet be independently agreeable: but to examine the correctneſs of the particular members, and the neatneſs and ſpirit of the ornaments, we muſt approach near enough to obſerve the minuteſt diviſions.

Fig. IV. A block modilion cornice, the profile taken from the ſecond external cornice of the Rotonda at Rome.

* The profile of another cornice, taken from the bridge at Rimini. Under it is the method of tracing ſtone quoins, the edges being left ſharp and not chamfer'd; if either of theſe block cornices are uſed, the height of the building muſt be divided into eleven equal parts, one of which is given to the cornice.

Fig. V. VI. VII. Three methods from Serlio to deſcribe globular and oval vaſes. The laſt may ſerve to deſcribe the eggs for mouldings; the pine buds may be traced in the ſame manner, obſerving to place the narrow end upwards.

CHAP. IV.

Of the Doric Column, with the Flutings. Of the Doric Entablature. Of the Doric Portal. Of the Doric Colonade. Of the Doric Arcade.

PLATE V.

THE Doric ſhaft D. is without a baſe, as may already have been remarked in the firſt plate, but it ſhould always be placed on a baſement, plinth, or (*a*) ground ſill, whoſe height from the ground may admit of one, (*b*) three, or a greater unequal number of ſteps, each ſtep being from ſix to eight inches high. The Doric ruins of Greece, and thoſe of the temples at Poeſtum, have all ſuch baſements. The addition of a baſe to the Doric ſhaft is a downright innovation againſt the moſt deliberate intentions of the ancients; may it not be reaſonable to conjecture, that as the foot of this column is ſufficiently broad in proportion to its height, they who firſt deſigned it, as well as thoſe ſkilful maſters who immediately ſuc-

(*a*) Supraque terram parietes extruuntur ſub columnis dimidio craſſiores quam columnæ ſunt futuræ; uti firmiora ſint inferiora ſuperioribus quæ ſtereobatæ appellantur: nam excipiunt onera. Spirarumque projecturæ non procedant extra ſolidum.
(*b*) Namque cum dextro pede primus gradus aſcendatur, item in ſummo templo primus ponendus eſt. Lib. III. c. 3.

ceeded them, did not imagine that it would want any additional projecture for the ſake of greater ſolidity? that the ſimplicity of its character could not admit of a baſe? for as the ſtatue of a Hercules, or of a wreſtler would appear out of character if their feet were dreſſed up in (*c*) ſandals or ſhoes, ſo would the column to which they had annexed theſe ideas.

The number of flutings (*d*) to the Doric column ſhould never be more or leſs than twenty. Sometimes it was left with the ſides flat and XX angles. The curvature of each fluting is deſcribed from the center of a geometrical ſquare, X whoſe ſides are equal to one of the flat ſides. Others have traced the curvature from the ſummit of an equilateral triangle Z. whoſe baſe is one of the flat ſides. The entablature and capital may be traced by ſcales of equal parts, *e. g.*

For the capital divide its entire height into two equal parts; take the uppermoſt for the abacus. Again divide c. d. into three equal parts; two of theſe are for the ovolo, and the remaining one is divided into three for the fillets: for the fourth fillet belongs to the ſhaft of the column; the projecture of the abacus is three parts of its height; that of the ovolo is equal to its own height, and the fillets are profiled, as is ſeen by the figure.

For the entablature, divide the height into ſeven equal parts, and each of theſe again into three; take ſeven of theſe ſubdiviſions for the height of the architrave, and eight of the ſame for the height of the frize, the ſix remaining will ſtand for the height of the cornice, which being divided into twelve, will aſſign to each member its relative number of parts, as may be ſeen by the figure.

The cornice projects once and a half of its height, then divide this projecture into nine equal parts, and the profiles are determined and deſcribed, as the figure readily ſheweth; but the modulary ſcale is added, and the different meaſures of the members may be taken by it.

The capital C. conſiſts of a plain abacus, an ovolo under it, with (*e*) three annulets, for the fourth belongs to the ſhaft or fuſt of the column. With very little alteration, the text in Vitruvius agrees with this diviſion.

The entablature deſcribed between C. and A. by beginning at bottom, conſiſts I. Of the Architrave of only one faſcia, with the Tænia, fillet, and ſix drops. Theſe drops are different from thoſe hitherto uſed: the ſimplicity and height of the architrave gives it a ſuperior degree of ſtrength to all others, commonly deſcribed.

II. The frize, conſiſting of the (*f*) triglyphs and (*g*) metopes; the height of the triglyph is one module and four parts, and its breadth one module. The breadth of the metope between

---

(*c*) Baſi ſpiram ſuppoſuerunt pro calceo. Lib. IV. c. 1.

(*d*) Columnas (Doricas) autem ſtriari XX ſtriis opertet quæ ſi plane erunt angulos habeant XX deſignatos: ſin autem excavabuntur, ſic eſt forma facienda; ita uti quam magnum eſt intervallum ſtriæ, tam magnis ſtriaturæ paribus lateribus quadratum deſcribatur: in medio autem quadrato circini centrum collocetur; & agatur linea rotundationis, angulos tangat, & quantum erit curvaturæ inter rotundationem & quadratum deſcriptionem, tantum ad formam excaventur. Lib. IV. c. 3.

(*e*) Craſſitudo capituli dividatur in tres partes, e quibus, una plinthus fiat.—Altera echinus, tertia cum annulis. Lib. IV. c. 3.

(*f*) Tum projecturas tignorum quantum eminebant, ad lineam et perpendiculum parietum præſecuerunt: quæ ſpecies cum invenuſta iis viſa eſſet, tabellas ita formatas, uti nunc fiunt triglyphi, contra tignorum præciſiones in fronte fixerunt, & eas cera cœrulea depinxerunt, ut præciſiones tignorum tectæ non offenderent viſum. Ita diviſiones tignorum tectæ triglyphorum diſpoſitione, intertignium & opam in Doricis operibus cæperunt. Lib. IV. c. 2.

(*g*) Ita quod inter duas opas eſt intertignium, id metopa apud eos (Græcos) eſt nominatum. Lib. IV. c. 2.

two triglyphs is one module and a half. The (*b*) triglyph is divided in its breadth into twelve parts, the two furrows and channels having each two parts, and the three ſhanks each two parts, and one part is given to each half furrow at the edges. The breadth of the triglyph regulates the ſix drops anſwering thereto, in the architrave, as the figure plainly ſheweth; the breadth of each drop being one modulary part, but each interval is a ſixth more. The depth of each furrow is half of its breadth.

To reconcile the angular triglyph to modern uſe, it would be ſufficient to ſay, that it is found in the beſt remains of Grecian antiquity. The third chapter of the fourth book of Vitruvius determines but very imperfectly for or againſt this point; the emendations of the editors have availed little to reſtore it to the true ſenſe. Yet we can fix upon another (*i*) paſſage favourable to this diſtribution of the triglyphs, for it does not follow that the metope next to the angular triglyph muſt be irregular on this account. Beſides the angular dentel in the Ionic, the angular modilion in the Corinthian cornice, were only ſubſtitutes in thoſe two modes for the angular mutules in the Doric; now theſe mutules cannot have this diſpoſition of planks as in fig. Q. which they are ſuppoſed to have, unleſs the triglyphs are angular, becauſe the mutules are placed of the ſame breadth, and exactly over the triglyphs. There is ſomething ſo unmeaning in the ſemi-metope, that it ſhould never more be received.

III. Immediately above the frize is the cornice. The loweſt member herein is the cap of the triglyph, called by Vitruvius *capitulum triglyphi*. This ſame platband is continued over the metope, but not quite ſo deep: the next member is a cyma reverſa; above it is the fillet, againſt which is placed the (*k*) mutules, one over each triglyph. The (*l*) drops in each mutule are ſix in front and three deep, as may be ſeen in the plan B. of the ſoffit, then comes the corona or drip with its peculiar cyma and fillet. The ſame members, only larger, finiſh the cornice, and one would be apt to preſume, that this curved member or boultin is the true *cymatium Doricum*, ſince we find it in neither of the other two modes.

The (*m*) heads of lions in this cornice, as in others, were intended as water-ſpouts to the ſides of a building.

The

(*b*) Non enim, quem ad modum nonnulli errantes dixerunt, femſtrarum imagines eſſe triglyphos, ita poteſt eſſe; quod in angulis contraque tetrantes columnarum triglyphi conſtituantur, quibus in locis non patiuntur res feneſtras fieri. Lib. IV. c. 2.

Triglyphorum latitudo dividatur, ex quibus quinque partes in medio, duæ dimidiæ dextra ac ſiniſtra deſignentur: regula una deformetur femur, quod Græce meros dicitur; ſecundum eam canaliculi ad normæ cacumen imprimantur. Ex ordine eorum, dextra ac ſiniſtra, altera femora conſtituantur, atque in extremis partibus ſemi canaliculi invertantur. Lib. IV. c. 3.

(*i*) Namque neceſſe eſt triglyphos conſtitui contra medios tetrantes columnarum, metopaſque quæ inter triglyphos fient æque longas eſſe quam altas: contraque in angulares columnas triglyphi in extremis partibus conſtituuntur & non contra medios tetrantes. Lib. IV. c. 3.

(*k*) Ex eo uti e tignorum diſpoſitionibus triglyphi: ita e canteriorum projecturis mutulorum ſub coronis ratio eſt inventa. Ita fere in operibus lapideis & marmoris mutuli inclinati ſcalpturis deformantur, quod imitatio eſt cantheriorum. Etenim neceſſario propter ſtillicidia proclinati collocantur. Ergo triglyphorum & mutulorum in Doricis operibus ratio ex ea imitatione eſt inventa. Lib. IV. c. 2.

(*l*) Et guttarum diſtributiones, ita uti guttæ ſex in longitudinem, tres in latitudinem pateant. Lib. IV. c. 3.

(*m*) In ſimus, quæ ſupra coronam in lateribus ſunt ædium capita leonina, ſunt ſcalpenda ita poſita, ut contra columnas ſingulas ea primum ſint deſignata: cætera vero æquali modo diſpoſita uti ſingula ſingulis mediis regulis reſpondeant. Hæc autem quæ erunt contra columnas perterebrata ſint ad canalem qui excipit e tegulis aquam cœleſtem. Mediana autem ſint ſolida uti quæ cadit

The invariable regular diſtribution of triglyphs and metopes for any given (*n*) front, muſt always regulate a Doric deſign. It is obſervable in the Grecian remains, that the external edge of the angular triglyph in the frize is directly over the greateſt diameter of the column, but we have ventured to make it fall upon the diminution of the column, this does not in the leaſt affect the diſtribution of the triglyphs and metopes, for, excepting the angles, the centers of the columns are all ſuppoſed to paſs through the centers of the triglyphs. The height of the column with its capital, is XIV modules, according to Vitruvius, but in the deſigns of the firſt, as well as of the next plate, according to the Grecians example, it is allowed no more than XII. S. mod, as it has already been quoted in the table of altitudes.

What a beautiful and proportional ſimplicity appears throughout every part and member of this Doric! the diſtinction and character are ſpecially preſerved, with ſuch authentic marks, as muſt ſet aſide among the unprejudiced, thoſe ſpurious, uncertain and confuſed traces of the order hitherto received; for the foundations of the art are principally to be fixed upon examples *of the beſt antiquity, and we ſhould build upon thoſe to inſure the ſucceſs of any deſigns.*

PLATE VI.

The Doric portal A. preſents a front of four columns ſupporting a pediment, with three intercolumniations; the middle one of two triglyphs, and the two lateral of one triglyph each; theſe, with the four triglyphs placed over the four columns, occaſion this front to conſiſt of eight triglyphs and ſeven metopes, which full extent is equal to XVIII. S. modules, a triglyph is placed at each extremity, ſo that the half module falls out in the odd number of the metopes.

When a front contained four columns it was called tetraſtyle; if ſix columns, hexaſtyle; if eight columns, octoſtyle, &c. this appellation they joined to that of the intercolumniation, as tetraſtyle-ſyſtyle, exaſtyle-diaſtyle, octoſtyle-pycnoſtyle, &c. When we come to ſpeak of the antique temples, we ſhall find that to theſe compound names, they added the names of the order, and methods whereby they diſpoſed the columns to the fore and back fronts, as well as to the ſides of the building.

In the elevation of this plate, the Doric portal of the Agora at Athens, is taken for an example. By the plan A. it may be obſerved, that the columns are advanced one diameter and two-thirds beyond the antæ or pilaſters B. theſe pilaſters (*o*) are placed with a ſmall projecture upon the ends of the ſide-walls, behind the two extreme columns of the front; their breadth being equal to the diameter of the column, but at the ſides, when there is no column before them, their breadth is only half that of their front. The pilaſters have not the ſame diminutions as the columns, and the capitals of theſe antæ are different from thoſe of the columns, being divided into a greater number of mouldings. See figure C.

---

cadit vis aquæ per tegulas in canalem, ne dejiciatur per intercolumnia neque tranſeuntes perfundat. Sed quæ ſunt contra columnas, videantur emittere vomentia ructus aquarum ex ore. Lib. III. c. 3.

(*n*) Frons ædis Doricæ in loco quo columnæ conſtituuntur dividatur ſi tetraſtylos erit in partes XXVI. ſi hexaſtylos in XLII. ex his pars una erit modulus, qui Græce embates dicitur, cujus moduli conſtitutione rationibus efficiuntur omnis operis diſtributiones. Craſſitudo columnarum erit duorum modulorum, altitudo cum capitulo XII. S.———Hæc ratio in operibus diaſtylis erit conſtituta. Si vero ſyſtylon & monotriglyphum opus erit faciendum, frons ædis, ſi tertraſtylos erit, dividatur in partes XVIII. S. ſi hexaſtylos erit, dividatur in partes XXVIII. S. ex his, pars una erit modulus, ad quem (uti ſupra ſcriptum eſt) opera diſtribuentur. Ita ſupra ſingula epiſtylia & metopæ duæ, & triglyphi ſinguli erunt collocandi, in angularibus non amplius quam quantum ſpatium triglyphi. Accedit in mediano contra faſtigium trium triglyphorum & quatuor metoparum ſpatium, ut latius medium intercolumnium accedentibus ad ædem habeat laxamentum & adverſus ſimulacra deorum aſpectus dignitatem. Lib. IV. c. 3.

(*o*) Antæ quod Græce paraſtatæ dicuntur——columnæ habentes poſt ſe paraſtatas. Lib. IV. c. 1.

To

To deſcribe a door-way within this portal, divide the height contained between the floor and the undermoſt line of the architrave into ſix equal parts. Take four for the height of the aperture, and make the breadth equal to half its height. The architrave and jambs have their proportions and mouldings given ſuitable to the character of the order. Sometimes the ancients added a frize D. which they called *hyperthyron*, and above this a tablet E. for any inſcription or work of ſculpture, referring to certain particularities of the building.

If in the lateral intercolumniations niches ſhould be required, the breadth of each is to be made equal to half of the breadth of the door's aperture, and the heights twice and one half of their breadths; obſerving to deſcribe their ſummits ſemicircular, as well as their plans. Although ſome modern authors have exclaimed againſt niches, yet they may be introduced with propriety to break the naked of a plain wall, or to range in the ſame levels and perpendiculars with the windows of a front, whenever theſe apertures ſhould not take place. They are the proper receptacles of the ſtatues; nor can an architect's deſigns be too much diverſified, where a ſuperior degree of magnificence requires ſuch additional ornaments, if he is careful not to give into abſurdities. This leads us to ſay a word more about the temples of the ancients.

The deities of the Pagans were repreſented under the human ſhape, ſo that by attributing certain characters to the orders, the architects ſeem to have judged it neceſſary, to have regard to what was ſuitable to every diſtinct deity, not only in the choice of the ſituation of places, but alſo in the choice of the form (*a*) and order of the temple. Thoſe dedicated to the Sun, to the Moon, or to Veſta, were circular, like that at Tivoli. The temples in honour of Jupiter, as the thunderer, were uncovered in the middle. They appropriated the Doric order to Mars, to Hercules, and to Minerva. The Corinthian was affected to Venus, Flora, Proſerpine, Apollo, the Muſes and the Nymphs. Juno, Diana, and Bacchus, were worſhipped in temples of the Ionic order. The plans and elevations of the walls, pilaſters and columns, were varied in ſeveral different manners, beſides the diſtinctions of the orders. They are deſcribed in Vitruvius, as (*b*) undermentioned, and Palladio explains them in his fourth book; we ſhall juſt mention them, becauſe from the following verbal deſcriptions any of them can be deſcribed.

I. The temple without columns, when the breadth did not extend to twenty feet: The length was twice its breadth, and the length being divided into eight equal parts, five of theſe were given to the cell, and the three remaining ones were aſſigned to the antitemple or pronaos, flanked with the ſide-walls, on the extremities of which were placed the pilaſters called antæ. II. The temple in antes, with two columns on the ſame line with the pilaſters, and placed between them. III. The temple in antes, with two columns within the pronaos behind thoſe in front: The inner columns were of leſſer diameter than thoſe in front, though their heights were equal; but to make them appear of equal circumference, they had a greater number of flutings, either eight and twenty, or thirty-two. It was peculiar to this temple to ſhut up the middle intercolumniation with a parapet or baluſtrade, in the nature of a podium, the entrances being left at each ſide between the antes and the columns. IV. The proſtyle or a front of columns, from four to ſix, &c. forming a portico advanced before the antes. V. The amphi-proſtyle, with the ſame mode and number of columns in the back front as in the fore front. VI. The peripteral or winged, having ſix columns in front, and ſix in the rear of the temple, beſides (*c*) eleven on (*d*) each ſide, including the angular columns of the two fronts, their diſtance from the walls being equal to the interval preſcribed to between two columns.

In

(*a*) Lib. I. c. 2. (*b*) Lib. III. c. 1. & Lib. IV. c. 4. & 7.

(*c*) Ita enim erit duplex longitudo operis ad latitudinem. Namque qui columnarum duplicationes fecerunt erraviſſe videntur, quod unum intercolumnium in longitudine plus quam oporteat procurrere videatur. Lib. III. c. 3.

(*d*) Pteromatos enim ratio & columnarum circum ædem diſpoſitio ideo eſt inverſa ut aſpectus propter aſperitatem intercolumniorum haberet autoritatem. Præterea ſi & imbrium aquæ vis occupaverit & intercluſerit hominum multitudinem, ut habeat in

In this place it is proper to remark, that the temple of Theſeus at Athens, for example, inſtead of eleven columns of each ſide, has thirteen; thus it exceeds in length twice its breadth: but we may ſuppoſe, that this addition of two columns to the length of its ſides, was the conſequence of advancing two columns deep before the antes inſtead of one, and this required alſo a proportional length of the cell, which it could not have with only eleven columns on the flank, if two of theſe at both ends were advanced before the antes.

VII. The pſeudodipteral or falſe double winged, that has two ranks of eight columns to each front, and fifteen columns on each ſide, including the angular ones of both fronts. The diſtance of the columns from the ſide walls is equal to two intercolumniations and one diameter. VIII. The dipteral or double winged, with two ranges of eight columns to the fore and back fronts, and two ranges of fifteen columns to each ſide. IX. The hypæthral, with two ranges of ten (*e*) columns to each front; their ſides were either pſeudodipteral or dipteral, the interior part of the cell was open to the ſky; within the walls, at the diſtance of one intercolumniation and the diameter of a column, were raiſed on all the ſides internally, two leſſer orders, one above the other, equal in height to the great external order. The roof only extended from the columns without to thoſe within; at each front, however, the pediment was carried over the entire breadth of the portico. X. The pſeudopcripteral or falſe winged, having the ſame number of columns in the fore front, and as many in the back front and on the ſides as the peripteral, but the walls of the cell of the temple were extended at the ſides and at the back front, to cut into the diameters of the columns. Such are the temple of Fortuna Virilis of the Ionic order tetraſtyle; and the temple of Concord, alſo Ionic, hexaſtyle, both at Rome; and the antique temple at Niſmes, called *La Maiſon Quarrèe*, of the Corinthian order and hexaſtyle; the three are deſigned and explained by Palladio, in his fourth book.

Of circular temples or rotundæ, there were two ſorts. XI. The monopteral, ſupporting a hemiſpherical cupola by a circle of inſulated columns at pycnoſtyle diſtances. The internal diameter of the plan was equal to the height of a column, and the height of the baſement (ſtereobates) was equal to one third of the diameter of the plan, and was aſcended by a due number of ſteps of convenient altitude. The floor of the temple was on the ſame level with the ſuperior part of the baſement. Sometimes, inſtead of a circle of inſulated columns, the cupola was ſupported upon a circular wall of the ſame height as that preſcribed to the inſulated columns, or the diameter of the plan was equal to its height the cupola included, like the Pantheon at Rome. XII. The circular peripteral temple had its columns at ſyſtyle intervals placed upon pedeſtals (ſtylobatæ) ſurrounding the temple. The diſtances of the pedeſtal, from the circular walls of the cell, was the fifth part of the entire diameter of the temple within the colonade. The diameter within the walls of the cell being equal to the height of a column upon its pedeſtal. Vitruvius mentions the cupola being crowned with a flower. At Athens there is a moſt beautiful one, which M. Stuart has deſcribed in the fourth chapter of his book.

In this plate we have given the plan in ſmall, of a Doric, hexaſtyle, ſyſtyle, peripteral temple, wherein the different parts may be ſeen at firſt ſight. The ſide-walls, which are advanced beyond the cells, are alſo called the wings, according to Strabo's deſcription of a certain temple at Thebes in Egypt. *Parietes qui utrimque pronaon circumcludebant Ptera vocata.*

æde circaque cellam cum laxamento liberam moram. Hæc autem ita explicantur in pſeudodipteris ædium diſpoſitionibus: quare videtur acuta magnaque ſolertia effectus operum Hermogenes feciſſe, reliquiſſeque fontes, unde poſſeri poſſent haurire diſciplinarum rationes. Lib. III. c. 2.

(*e*) Medium autem ſub divo eſt ſine tecto, adituſque valvarum ex utraque parte in pronao & poſtico. Hujus autem exemplar Romæ non eſt, ſed Athenis, &c. Lib. III. c. 1.

PLATE

PLATE VII.

We have obſerved before, that every Doric ſtructure muſt be regulated by the triglyphs and metopes. The proper diſtribution for a Doric colonade would be only that of two triglyphs, as deſigned for the middle of the portal in the laſt plate; but the neceſſity of a wider intercolumniation, may, on ſome occaſions, require three triglyphs; in this caſe the columns may be diſpoſed by couplets, for a ſufficient ſtrength to ſupport the entablature at fig. A.

Near Trevi, between Fuligno and Spoleto, is a little temple, where the portals are ſupported at the angles by columns and pilaſters in couplets. But this is a corruption of the antique purity, which conſidered equi-diſtant columns, with narrow intercolumniations, as producing the moſt deſireable effects, both on account of ſtrength and beauty.

The boaſted colonade of the Louvre by Perrault would have merited much higher commendation, if the intercolumniations between the center and the ends, had been equidiſtant, inſtead of couplets; thereby the jambs of the niches might have been ſomewhat obſcured, but the very elegant diſpoſition of the columns, would have ſufficiently made amends: it is more eſſential to avoid errors in the greater lines of a deſign, than to be over ſcrupulous about the minutiæ of little parts.

The Grecians called a colonade or portico, Stoa, which gave the name of Stoics to the diſciples of Zeno, who were accuſtomed to aſſemble together in the porticos. When a portico ſurrounds internally any open oblong or ſquare ſpace, it is called a periſtyle, to diſtinguiſh it from the periptere, where the columns are diſpoſed without-ſide.

The Doric Arcade B. is deſigned without columns; for this purpoſe, the height of the arch is to its breadth as ſeven to four; (and it loſes its proportional character, if made higher.) Divide the given height a. b. into eleven equal parts, take two for the height of the entablature, which by the proper modulation is divided into the requiſite members. Let the extent of four triglyphs and three metopes fix the breadth of the aperture, then the breadth of the pier will conſiſt of two metopes and one triglyph. The reſt may be collected by inſpection of the figure.

If with the above breadth for the aperture of the arch, you make its height only once and a half its breadth, it would then admit of ſemicolumns againſt the piers, raiſed upon plinths, as fig. E. but the expences of columns againſt the piers of arcades ſeem very uſeleſs for common purpoſes. For theatres and amphitheatres, the addition of the ſemicolumns to the piers, gave an additional ſtrength, by increaſing the depths of the piers, and ſerved to break the too great plainneſs or nakedneſs which otherwiſe would have appeared upon ſuch vaſt extents. Pilaſters projecting from the piers of arcades, from one eighth to one fourth of their diameters, have ſometimes taken place inſtead of ſemicolumns. The archivolt C. and the impoſt D. ſhould have their members and mouldings characteriſtically deſcribed from the architraves in every order.

Key-ſtones, whether plain or ſcrolled, with ornaments of maſks or foliage, interrupting the members of the archivolt, give it an apparent weakneſs, and deſtroy the beautiful effect and ſimplicity of the ſemicircular ſweep: perhaps it may not be judged ſo by others, who will bring againſt this opinion the authority of key-ſtones from ſome of the Roman antiquities, and from the practice of ſeveral of the beſt moderns; but if an ornament is ill-placed, no authority ſhould protect it.

CHAP.

CHAP. V.

Of Pedeſtals. Of the Ionic Baſe and Column. Of the Capital. Of the Entablature. Of the Volute at large. Of the Flutings and Baſe at large. Of Fluted Pilaſters. Of the Ionic Portal. Of the Ionic Portico, with Pedeſtals.

THE uſe of the baſement (ſtereobates) was ſaid in the laſt chapter to raiſe the floor of a building above the level of the ground, and to place thereon the ſhafts of the columns; but the origin of a pedeſtal ((*a*)ſtylobates) raiſed above the floor, ſeems to be owing to the neceſſity of uſing columns which turned out too ſhort for the intended work, or that the intervals between two pedeſtals (*b*) along the ſides of the building might ſerve as a podium, a parapet or baluſtrade having the ſame mouldings as the pedeſtals, at top and bottom; but for the portal in the front of the building, the pedeſtals were inſulated, to admit of a free paſſage between the intercolumniations. The height of the pedeſtal conſidered as a parapet can have no relative proportion to the column it bears, becauſe the height of a parapet is unalterably fixed from three feet to four at moſt, and this may equally ſerve a column of ten feet, or one of thirty feet in height. A pedeſtal is no part of an order, nevertheleſs, the members are to be characterized according to the column it bears.

Some of the moderns have launched into a depravity of making the pedeſtals exceſſive high; others have judged ſo ill as to place one pedeſtal upon another, that the columns ſeem to be hoiſted upon ſtilts, againſt all the rules of ſolidity and beauty.

The word *Scamillus*, ſignifies properly a little ſeat, or a footſtool; what can reſemble more to either of theſe, than that part of the continued pedeſtal that breaks forward under every column? and as the number of columns in the ſides of the periptere was unequal, ſo it was neceſſary to hint that theſe ſtools *(ſcamilli)* upon which the columns were to be raiſed, muſt be in odd numbers (*impares*) likewiſe. And if the projectures of all theſe ſcamilli were ſet off in a right line (*ad libellam*), it made the whole ſide of the ſtylobates appear (*alveolatus*) channelled out or indented by regular intervals.

PLATE VIII.

The figure marked II. repreſents the profile of an Ionic pedeſtal; the upper moulding thereof is a plinth, becauſe the lower moulding of the baſe hereafter deſcribed is a torus; all the other mouldings of this pedeſtal are adapted with a ſuitable ſimplicity.

The Ionic order of Vitruvius, as delivered down to us by his editors, is indeed very ſimple, but, at the ſame time, very poor, from the littleneſs of all its parts: what is here offered, is from the ruined temple on the Ilyſſus at Athens; it is as elegant as plain, from the ſimplicity

---

(*a*) Sin autem circa ædem extribus lateribus podium faciendum erit, ad id conſtituatur uti quadræ, ſpiræ, trumi, coronæ, lyſis ad ipſum ſtylobatam, qui erit ſub columnæ ſpiris, conveniant.——(*b*) Stylobatam ita oportet exæquari uti habeat per medium adjectionem per ſcamillos impares. Si enim ad libellam dirigetur alveolatus oculo videbitur. Hoc autem uti ſcamilli ad id convenienter fiant, item in extremo libro forma & demonſtratio, erit deſcriptæ. His perfectis in ſuis locis ſpiræ collocentur, &c. Lib. III. c. 3.

and

and greatneſs of its parts. The diviſions are made from a ſcale of modules. The greateſt diameter of the column, juſt above the apophyge, is divided into thirty-ſix parts for two modules.

The baſe G. is very peculiar and beautiful; it begins from the bottom with a torus; above this is a ſcotia, or hollow, between two fillets; the remainder is divided into ſeveral very ſmall mouldings, which convey the idea of ſeveral nice folds (*a*) of a female garment, that is likewiſe indicated by the flutings of the ſhafts. Theſe mouldings are too nice to be executed in common ſtone, but by diminiſhing their number, the general profile may ſtill be preſerved, as will be ſhewn in plate IX. for the baſes to this order.

The ſhaft F. is occaſionally ornamented with flutings; the (*b*) number aſſigned is twenty-four; to deſcribe theſe flutings and fillets, divide the periphery, or circumference, into twenty-four equal parts, and one of theſe again into eight parts, ſix of which are allowed for the breadth of one of the flutings, and one for the half of each fillet, as will be ſeen at large *in the next* plate for the Ionic flutings.

The capital here delineated has great elegance and ſimplicity; if we look at the front of it C. we may obſerve, that the curvature of the volutes by far ſurpaſſeth that of all others hitherto deſcribed in the works of the beſt modern maſters, or of any deſigns collected from the remains of Rome; the ſweep or undulating lines of the hem that paſs over the middle ovolo, is very graceful; the ſituation of the eye of the volute is well choſen, being fixed ſo much nearer to the lower than to the upper part of the volute, as it would naturally have that propenſity in a (*c*) buckle of hair, if a bead or flower was thus placed. The breadth of the ſpiral fillets is divided by a channel into two, when the materials are hard enough to bear it.

The ſemi-profile D. of the ſide of a volute. The fulneſs of the (*d*) bolſters anſwers perfectly well to the front, and the little mouldings or binders are well choſen and properly placed.

The plan E. repreſents the bolſter of the volute with its binders, with the ovolo and the ſemi-plan of the upper part of the ſhaft, the diameter thereof is fixed at one module and twelve parts.

K. Sheweth the junction of the two ſemi-volutes, on the internal angle of the capital of each angular column.

The entablature A. is nearly that from the antiquities of Athens. The principal members are thus meaſured:

	M.	p.
To the architrave, with its mouldings,	1	9
To the frize, including the little fillet,	1	9
To the cornice,	1	0
Projecture of the cornice,	1	9

The quantities of the ſeveral mouldings may be meaſured from the ſcale of modules, though we ſhould always recommend a ſubdiviſion by equal parts.

It muſt be remarked, that when there is a pediment, the level drip remains with only its boultin moulding at top; the fillet immediately next to it in profile being carried upwards in the ſide of the pediment.

(*a*) Truncoque toto ſtrias uti ſtolarum rugas, matronali more demiſerunt. Vitr. Lib. IV. c. 1.

(*b*) Striges faciendæ ſunt XXIV. Lib. III. c. 3.

(*c*) Capitulo volutas, uti capillamento conciſpatos cincinnos præpendentes dextra ac ſiniſtra collocaverunt, & cymatiis & encarpis pro crinibus diſpoſitis, frontes ornaverunt. Vitr. Lib. IV. c. 2.

(*d*) Pulvinorum baltea. Ib. Lib. III. c. 3.

The baſe of the column, the elegant volutes of the capital, the juſt and grand diviſion for ſtrength and beauty of the entablature, the cornice being diſtinguiſhed for the greatneſs of its profile, the frize for a ſpacious ſurface for any works of ſculpture, and the architrave for its ſtrength, being not broken into two or more facias, are conſiderations which ſhould recommend this entablature.

The ſide B. is like the former A. four modules in height, but it is divided as follows to admit of (*e*) dentels in the cornice.

	M.	p.
To the architrave,	1 :	6
To the frize,	1 :	2
To the cornice,	1 :	10
Projecture of the cornice.	1 :	12

The profile and the mouldings may be ſeen in the figure.

It muſt not be paſſed over, that the internal and external angles, by the diſtribution of the dentels here marked out, may always be furniſhed with a dentel; the reaſon of this derives from the placing of the (*f*) timbers, fig. M. Therefore, as the angular mutule and triglyph in the Doric, ſo the angular dentel in the Ionic, and the angular modilion in the Corinthian, will have their proper ſituation preſcribed according to the primitive imitation.

A ſwelling frize has been given by Palladio and Scamozzi as characteriſtic to this order, but as it is not abſolutely ſo, it is beſt omitted, becauſe it gives a diſagreeable heavy appearance.

PLATE IX.

A ſpiral line is a curve of the circular kind, which in its progreſs approaches to, or recedes from its center to any deſired number of revolutions.

There are two ſorts of ſpiral lines of uſe in architecture.

I. The helix, which winds itſelf around a cylinder to any given height.

II. The volute, that winds itſelf about a cone, ſo as the points thereof continually approach the axis.

Fig. A. the volute of the Ionic little temple mentioned in deſcribing the laſt plate. The manner of tracing it is thus:

At two parts diſtant from the ſhaft of the column continued upwards, let fall from the lowermoſt line of the abacus, an indefinite perpendicular for the cathetus of the volute, which interſected at fourteen modulary parts below the point whence it is dropped, gives the center of the eye of the volute, which is deſcribed with a radius of two modulary parts; but the radius for the external circle that forms the rim, is two and a half modulary parts. The eye being de-

---

(*e*) Si Doricis epiſtyliis in coronis denticuli ſculpentur, aut in pulvinatis capitulis & columnis Ionicis epiſtyliis exprimentur triglyphi, tranſlatis ex alia ratione proprietatibus in aliud genus operis, offendetur aſpectus, aliis ante ordinis conſuetudinibus inſtitutis. Vit. Lib. II. c. 1.

(*f*) Item in Ionicis denticulorum conſtitutio, propriam in operibus habeat rationem & quemadmodum mutuli cautheriorum projecturæ ferunt imaginem, ſic in Ionicis denticuli ex projecturis aſſerum habent rationem. Lib. IV. c. 2.

ſcribed, (ſee the figure at large) the perpendicular radius, conſiſting of two modulary parts, is divided equally at a. draw the line a. 1. at right angles, which falling againſt the tangent drawn for that purpoſe, gives therein the point 1. for the center of the firſt quadrant; continue the line 1. a. to 2. making a. 2. equal to half of the radius, and the point 2. is the ſecond center, obſerving that the ſegments deſcribed from this and all the following centers be perfect quadrants. From 2. let fall the perpendicular 2. 3. upon the diameter at point 3. is the third center. Take from 3. to 4. equal to three-fourths of the radius, and the point 4. upon the diameter is the fourth center. Erect the perpendicular 4. 5. equal to three-eighths of the radius, and the point 5. is the fifth center. Take from 5. to 6. equal to half the radius, and the point 6. is the ſixth center. Let fall the perpendicular 6. 7. and the point 7. upon the diameter is the ſeventh center. Take 7. 8. equal to three-eighths of the radius, and the point 8. is the eighth center. Erect 8. 9. equal to one-fourth of the radius, and the point 9. is the ninth center. From 9. to 10. is equal to one-fourth of the radius, and the point 10. is the tenth center. Let fall the perpendicular from 10. to 11. and the point 11. upon the diameter is the laſt center: and the ſpiral of the volute is completed by a regular involution to the rim of the eye.

In order to make the liſtel or hem of the volute have a true and gradual diminution of its breadth when it meets the rim of the eye, the ſecond ten centers are to be ſet off at one-tenth of three quarters of a modulary part, within the ten firſt centers fixed as above.

Fig. B. is the Ionic baſe at large of the ſame ruin. But as the number of ſmall and ſharp mouldings therein could only be executed in marble, or the hardeſt ſort of materials, another profile * is deſcribed with larger diviſions, wherein the character is ſufficiently marked. The Ionic baſe ‡ by Vignola, omitting the plinth, turned topſy-turvy to remove the reaſonable objection of the great torus being incumbent upon the ſmaller members, gives likewiſe a very characteriſtic baſe for this order. The temple of the Sybil at Tivoli has baſes to its columns without plinths, and they are only one-third of the diameter of the column in height.

Fig. C. the manner of deſcribing the elliptical cavities for the flutings of the Ionic columns, from the antiquities of Athens.

D. The manner of tracing the ſtaffs or cables for ſemicircular flutings appropriated to the Corinthian order.

E. The manner of dividing a Corinthian pilaſter (for none other is fluted) into thirty-ſeven equal parts, for nine flutings. One of the parts is allowed to each fillet, and three to each fluting.

F. The breadth of a pilaſter, with ſeven flutings, is divided into twenty-nine equal parts, giving one to each fillet, and three to each cavity. The number of ſeven flutings in a pilaſter, anſwers better to twenty-four flutings of the column, becauſe nine flutings in a pilaſter make the channels too narrow; but the higher a ſhaft of a column is, the greater number of flutings it may have, which may be increaſed even to twenty-eight or thirty.

The two extreme fillets of a pilaſter have ſometimes the addition of an aſtragal or bead, an example of this is at the Pantheon in Rome. In ſuch a caſe, for ſeven flutings, divide the breadth into thirty equal parts, taking one and a half for each extreme fillet, with its bead, and the remainder divided as before preſcribed.

Pilaſters are often not fluted, though the columns that accompany them are, and ſometimes columns are not fluted, though the correſponding pilaſters are. The projecture of a fluted pilaſter from a wall can never be leſs than equal to one cavity and two fillets; but the beſt projecture for the advantage of the capitals, is one-fourth of the diameter.

The extremities of the flutings towards the baſe, are either circular downwards, or circular upwards, and ſometimes terminate ſquare. The firſt is the moſt approved method. The flutings of

of ſome columns have their lower extremities deſcend into the apophygis, and their extremities at the capital terminate in the ſhape of leaves. See the Choragic monument of Lyſicrates, antiq. of Athens.

PLATE. X.

Repreſents an Ionic portal from the abovementioned ruin at Athens. It is the front of the little temple already mentioned. This edifice is raiſed upon a ſtereobates of three ſteps.

A. The plan of the ſtereobates, with the plans of the columns to the pronaos or anti-temple; behind the angular columns, at the extremities of the ſide-walls advanced forwards, are placed the antæ or pilaſters, with a ſmall projecture. The plan of the cell is an exact ſquare, and the whole of it is deſigned in ſmall on this ſame plate. The diameter of the columns is near one foot nine inches.

B. The elevation of the ſteps and of the columns, with the pediment.

C. The capital of the pilaſter, not at all ſimilar to the capital of the column. This diſtinction is worthy of particular notice.

D. The plan of the capital of an angular column, to ſhew how the external volute is curved inward; the ſide of the capital has two volutes ſimilar to thoſe in the front. The back part and inſide have the bolſters, which interſect each other at the eye of their ſemi-volutes.

To deſcribe a door-way to this front; the height from the floor to the bottom of the architrave may be divided into ſeven equal parts. Six of theſe will give the height of the aperture, whoſe breadth is half of its height.

Whenever niches may be required in ſuch a deſign, let their upper parts range in a line with the height of the door-way; their breadths being equal to half the breadth of the door's aperture, and their heights twice and a half their own breadths.

In the other corner of this plate is deſcribed the half of that very rich and beautiful capital of the temple of Minerva Polias.

For the Ionic arcade, whether it be traced with or without columns, the following meaſures will fix the ſeveral proportions thereof, without referring to any figure for this purpoſe. Divide the entire given height into XI. equal parts, which take for XXII. modules, with the following diſtributions:

	M.	p.
For the height of a ground-ſill or baſement above the ſurface of the ground,	1 :	-
For the height of the arch above the baſement,	16 :	-
For the diſtance between the arch and the architrave,	1 :	-
For the height of the entablature, with its members as before deſcribed,	4 :	-
The breadth of the Arch,	8 :	9
The breadth of the piers,	4 :	-
The impoſt,	1 :	-
The archivolt,	:	16

If a ſemi-column is intended to be placed againſt the pier, the axis thereof is fixed in the middle of the breadth of the pier, and its baſe is placed upon the baſement. The altitude of the column with its capital and baſe, on this occaſion, is eight and a half diameters.

PLATE

PLATE XI.

There may be various occaſions to deſcribe an Ionic portico, with the pedeſtals under the columns, and the podium or parapet between two pedeſtals. The under-written dimenſions may determine the ſeveral proportions, from a modulary ſcale.

For the plan	M.	p.
The middle intercolumniation is,	6	-
All the others, each	4	9

For the elevation	M.	p.
The height of the pedeſtal, which determines the diameter of the column nearly at two feet,	4	-
The height of the entire column,	16	-
The height of the entablature,	4	-

The niches are deſcribed ſo as to have their archivolts range with the undermoſt line of the architrave of the door-way, which is four parts out of five, from the ground line to the bottom of the architrave, and the bottoms of the niches range with the ſuperior part of the baſes of the columns, from the given heights you may adjuſt the breadths.

The door is made with foldings, or bivalved, and the pavement of the podium riſes up one ſtep.

The windows are imagined for ſuch a deſign to be on the oppoſite ſide, or at each end.

The tablets over the niches and the door are intended for ornaments of ſculpture in baſſo relievo.

CHAP. VI.

Of the Corinthian Order, Pedeſtals Baſe and Column. Capitals and Entablatures. Of the Portico. Triumphal Arch.

THE Corinthian order exhibits the higheſt degree of delicacy, beauty, and richneſs, to which any architectural deſign can arrive. It took its riſe in that happy ſoil of Attica, for Callimachus the Athenian, a moſt ingenious ſculptor, was the inventor of its (*a*) capital, which being firſt executed at Corinth, received its name from thence. It appears that the members and mouldings of the entablature had no other inſtitution than what was already eſtabliſhed in the nature of things for the Doric and Ionic modes (*b*); the Corinthian modilions, though differently proportioned, ornamented, and diſpoſed, anſwer to the Doric mutules, and when at times the modilions have been omitted, the Ionic dentels have taken place. Some indeed among the ancients, contrary to their beſt and chaſteſt rules, have placed (*c*) modilions and

(*a*) Columnæ Corinthiæ, præter capitula, omnes ſymmetrias habent uti Ionicæ. Lib. IV. c. 1.

(*b*) Cætera membra quæ ſupra columnas imponantur, aut è Doricis ſymmetriis aut è Ionicis moribus in Corinthiis collocantur. Ita è generibus duobus, capitulo interpoſito, tertium genus in operibus eſt procreatum. Lib. IV. c. 1.

(*c*) Itaque in Græcis operibus nemo ſub mutulo denticulos conſtituit. Lib. IV. c. 2.

dentels in the ſame Corinthian cornice. As to the (*d*) invention of the capital, the tale of it is commonly known; it may not, however, be improper to give the tranſcript of it from the original in his own words.

Vitruvius informs us, (*e*) that among the conſiderable edifices of different orders, the moſt remarkable were, the temple of Jupiter Olympius at Athens, the temple of Diana at Epheſus, the temple of Apollo at Miletus, and the temple of Ceres and Proſerpine at Eleuſis. Scamozzi mentions another temple in the iſland of Cyprus, dedicated to Venus. At Rome there are ſeveral ancient remains of this order, well known to curious travellers, and may be ſeen faithfully meaſured and delineated in the works of the accurate and ingenious Deſgodetz. All theſe edifices were certainly deſigned and executed by Grecian artiſts, as few extraordinary artiſts were found among the Romans; and it is paſt doubt, that ſeveral materials of edifices pulled down in Greece were brought to Rome and elſewhere, and there rebuilt, ſince the facility this people had in tranſporting ſuch immenſe bodies, muſt readily be granted, when one conſiders the Egyptian obeliſks which they brought into their capital, and there erected.

It is very remarkable, that the entablature which Palladio and other moderns have given to their Roman or Compoſite column, is no other than the true Corinthian entablature; as ſuch it was found with its capital in that beautiful and ornamented fragment, called the frontiſpiece of Nero, ſuppoſed to have made a part of the immenſe palace built by that emperor, and which he named his golden houſe, ſo called from the incredible richneſs beſtowed upon it. Suetonius deſcribes it as having ſeveral parts within ſide overlaid with gold, and every where adorned with the dazzling glitter of precious ſtones and mother of pearl. Its extent was from the Palatine to the Eſquiline Mount: it contained porticos ſupported by ſeveral rows of columns, a full mile in length: there was alſo a lake like a ſea, ſurrounded with buildings, like ſo many cities. From all this we may infer, that a relique of this pediment, muſt be received as one of the moſt authentic models, in all the members of its entablature; and this is further confirmed by the Corinthian entablature of the Poikile or ſtoa, in the antiquities of Athens, having exactly the ſame members; but firſt of the pedeſtal and baſe.

PLATE XII.

The pedeſtal A. is taken from the Stoa at Athens; by this we may obſerve, that the ancients were not fond of high pedeſtals, ſince the total height is little more than three ſemi-diameters, and the baſement plinth is higher than the die of the pedeſtal. Now, as we have ſaid before, the pedeſtal was very rarely intended but as a parapet or baluſtrade, (whoſe height is little variable) therefore the columns of the greateſt diameter will have the loweſt pedeſtals, and vice verſâ, in proportion to their diameter. For example, a column of two feet diameter may have a pedeſtal three feet and a half high, or a little more; and a column one foot and a half diameter muſt

---

(*d*) Ejus autem capituli prima inventio ſic memoratur eſſe facta. Virgo civis Corinthia jam matura nuptiis, implicita morbo diceſſit. Poſt ſepulturam ejus, quibus ea viva poculis delectabatur, nutrix collecta & compoſita in Calatho pertulit ad monumentum, & in ſummo collocavit: & uti ea permanerent diutius ſub divo, tegula texit: is Calathus fortuito ſupra acanthi radicem fuerat collocatus. Interim pondere preſſa radix acanthi media, folia & cauliculos circa vernum tempus profudit, cujus cauliculi ſecundum calathi latera creſcentes, & ab angulis tegulæ pondere neceſſitate expreſſi, flexuras in extremas partes volutarum facere ſunt coacti. Tum Callimachus, qui propter elegantiam & ſubtilitatem artis marmoreæ ab Athenienſibus, catatechnos fuerat nominatus, præteriens hoc monumentum, animadvertit eum calathum & circa foliorum naſcentem teneritatem, delectatuſque genere & formæ novitate ad id exemplar columnas apud Corinthios fecit, ſymmetriaſque conſtituit, ex eoque in perfectionibus Corinthii generis diſtribuit rationes. Lib. IV. c. 1.

(*e*) Præfat. Lib. VII.

have

have the ſame; in the firſt caſe only a diameter and a half, and little more, is allowed from the modulary ſcale, and in the laſt the pedeſtal B. admitted of two diameters and upwards. The die of the pedeſtal and the members of its cornice and baſe, ſhould be adorned with works of the ſculptor's hand, when the ſuperior parts of the order are intended to be greatly enriched.

The baſe C. is the Attic (*a*) baſe; it is given to this order in the abovementioned Athenian antiquity. What is particularly to be noticed is, that the plinth of this baſe projects beyond the die of the pedeſtal, and this does not affect the ſolid bearing of the column, becauſe the ſhaft is ſtill narrower than the breadth of the die of the pedeſtal, by the parts allowed to the ſweep of the apophyges. The Scozia can only be deſcribed as ſhewn here at large, when the materials are of a fine hard texture; if of others, the ſharpneſs of the edges would ſoon be deſtroyed.

D. The ſemi-plan of a column; *on this* are repreſented the cabled, or ſtaff flutings; they reach to one-third of the height of the ſhaft. Theſe cabled-flutings, ſeem appropriated to ſhafts for the Corinthian mode.

E. A kind of Attic capital, which has been in frequent uſe, both at Athens and in other parts of Greece; the upper range of leaves reſemble thoſe called by workmen water-leaves. The lower foliages are raffled and divided like thoſe in the Corinthian capitals. This capital was made out from a mutilated one found in digging about the octogon tower of the winds; and Mr. Stuart has given it among other deſigns of that Ruin. But whatever variety of foliage, or of other ornaments, there may be to a capital, it cannot conſtitute a new mode.

As we have had occaſion to mention the Temple of Jupiter Olympius, it is but right to inform our readers, that the ruins of it are ſtill to be ſeen at this day; Mr. Stuart has traced it from thoſe remains on the ſouth part of the city, which are vulgarly called the columns of Hadrian. Their dimenſions being ſix feet diameter, by ſixty feet in height; their incloſure or peribolus, was a circuit of near four ſtadia.

Wheler's account of the ſame ruins, ſeems to favour Mr. Stuart's opinion. "From this end of "the caſtle ſouth-eaſtwards, are thoſe tall and beautiful pillars, called Hadrian's pillars, and are "commonly reputed to be the remains of his palace; and were probably the greateſt ornaments "of it, if not of the city too, when the whole ſtructure thereof was entire. But my comrade and "I are not of their opinion that his palace was built on the top of them, for that would prove "too really a caſtle built in the air; they being about fifty-two feet high, comprehending the "chapters and baſes. But ſeventeen of theſe pillars remain upright."

PLATE XIII.

The divitions of the entablature marked A. are taken from the Poikile in the antiquities of Athens. It is deſcribed at two diameters or four modules in height, ſo that upon the whole it exceeds a little the original abovementioned; and in the deſigns plate I. the Corinthian entabla-

---

(*a*) Uti craſſitudo cum plintho ſit columnæ ex dimidia craſſitudine, projecturam quam Græci ecphoran vocitant habeant quadrantem. Ita tum lata & longa erit columnæ craſſitudinis unius & dimidiæ. Altitudo ejus ſi Atticurges erit, ita dividatur ut ſuperior pars tertia parte ſit craſſitudinis columnæ reliquum plintho relinquatur. Dempta plintho, reliquum dividatur in partes quatuor: fiatque ſuperior torus quartæ; reliquæ tres æqualiter dividantur, & una ſit inferior torus altera pars cum ſuis quadris ſcotia, quam Græci Trochilon dicunt. Lib. III. c. 3.

ture is deſcribed at four modules and nine parts for the greateſt altitude that ever ſhould be given. Vignola has made the entablature five ſemi-diameters or modules high, in which he is not to be followed, although there are examples of entablatures full as high in ſeveral of the ruins at Rome, viz. the temple of Jupiter Stator, of Mars the avenger, the Pantheon, and others; but it will appear, upon examination, that the columns belonging to them are not high enough in proportion, ſo that the entablatures appear too heavy and maſſive for that levity which ſhould prevail throughout every part of this order.

The ſeveral members of this entablature A. are great and diſtinct; the mouldings, in reſpect of ſize and profile neat and light. B. repreſents the ſoffit of the corner, with the under part of the modilions, and the coffers or pannels for the roſes or other flowers.

The ſoffit ſignifies the cieling of cornices. The pannels or coffers were the *lacunaria vel laquearia*, and were alſo deſigned for the cielings of rooms; as we may infer from Horace:

Non ebur neque aureum
Me renidet in domo lacunar.

Virgil alſo mentions theſe ornaments, Æneid Lib. I.

Dependent lychni laquearibus aureis.

And Cicero, 5. Tuſc. de Dionyſio, ſpeaking of a well known anecdote. *In hoc medio apparatu fulgentem gladium è lacunari ſeta equina ſuſpenſum juſſit.* Theſe lacunarian pannels or compartments were deſcribed of various ſhapes and ſizes for the ceilings of rooms, and were oftentimes adorned with paintings, and gilded or inlaid with the richeſt materials.

The Pantheon at Rome has a fine diſtribution of lacunarian pannels for the inſide of its hemiſpherical roof; each coffer was enriched with ornaments of Corinthian braſs, though Palladio ſays, that probably they were ſilver. Whatever they were, ſooner or later they did not eſcape the pillage of the beſiegers.

C. is a Corinthian entablature of a different profile from the former: the modilions are (*a*) ſcrolled; under them is the ovolo, next is the dentel platband, with its fillet above, and the cima reverſâ underneath; the frize is of the ſame altitude as the former; but the architrave has three facias: upon the whole, this is nearly the Corinthian entablature of Palladio. D. is the ſoffit of this cornice, with its pannels and roſes. The ſame leaves are traced to the under part of the ſcroll-modilions, as are uſed for the capitals of the columns. The whole may be ornamented in the moſt luxuriant taſte, which could be diſpenſed with but in very extraordinary circumſtances; ſometimes a Corinthian cornice may be traced without modilions, and the dentels may be cut, and ſometimes both the dentels and modilions are omitted; ſuch are the cornices of the temples of Veſta, of Antoninus, and Fauſtina, and of the altars within the Pantheon.

E. The Corinthian capital, according to ſeveral antique models extant, is only two modules or one diameter (*b*) in height; but in this plate we have given it two modules and ſix parts. The

---

(*a*) Latinè. Ancones ſive menſulæ.

(*b*) Ejus autem capituli ſymmetria ſic eſt facienda, uti quanta fuerit craſſitudo imæ columnæ tanta ſit altitudo capituli cum abaco. Abaci latitudo ita habeant rationem, ut quanta fuerit altitudo, bis tanta ſit diagonios ab angulo ad angulum. Spatia enim ita juſtas habebunt frontes quoque verſus. Latitudinis frontes ſinuentur introrſus: ab extremis angulis abaci, ſuæ frontis latitudinis nona: ad imum capituli tantam habeant craſſitudinem, quantum habet ſumma columna, præter apotheſin & aſtragalum. Abaci craſſitudo ſeptima capituli Altitudinis. Dempta abaci craſſitudine, dividatur reliqua pars in partes tres, ex quibus una imo folio detur: ſecundum folium mediam altitudinem teneat: cauliculi eandem habeant altitudinem, è quibus folia naſcuntur projecturæ, uti abacum excipiant: quæ ex cauliculorum foliis natæ procurrant ad extremos angulos volutæ, minores helices floribus (qui inter medium frontium abaci ſunt) ſubjecti ſcalpantur. Flores in quatuor partibus quanta erit abaci craſſitudo,

The lower range of leaves are placed higher than uſual, and their projecture is duly preſcribed; herein we ſhould chuſe to follow Scamozzi, who has obſerved a mean projecture between Palladio and Vignola, the one keeping theſe leaves too near to the vaſe, and the other having them projected too far out. In all the antique capitals, the diſpoſition of the leaves is almoſt always different, both with reſpect to their heights and their projectures.

One ſide of this capital is left naked, in order to ſhew the configuration of the vaſe, with its rim under the leaves; in ſome models the corners of the abacus above the vaſe are cut off; but the abacus of the capitals of the poikile, are drawn to a ſharp point. They are the ſame for the temple of Veſta at Rome. The twiſted ſtalks, called the helices or cauliculi, that ariſe from between the leaves, turn down in form of ſcrolls, when they reach the rim of the vaſe; there are eight of theſe ſmaller ſcrolls, and eight larger ones; the latter riſe high enough to touch the bottom of the abacus deſcribed above the vaſe; there are two of the ſmall, and two greater to each front, ſixteen volutes to the four ſides. Over the two ſmall ones is placed a roſe, or ſome other flower, of circular form, to every front of the abacus.

The leaves uſed for covering the vaſe of this capital are of different ſorts. The acanthus, the laurel, the olive, and the parſley leaf. The moſt common in uſe is the olive leaf; it is leſs confuſed than the others, and is more frequently found in the antique capitals. Michael Angelo made choice of it for the great Corinthian capitals of St. Peter's church.

Between the bottom of the vaſe and the aſtragal of the ſhaft, is a little fillet that ſeparates the one from the other; this is an Attic peculiarity, perhaps hitherto unknown, but like every other hint from that Mother-ſchool, is worthy our notice.

The plan of the capital is traced by deſcribing the circle for the plan of the upper part of the ſhaft, then through the center, draw the two diagonals at right angles, interſecting one another, the full extent of each being four modules, that is, two modules on every ſide from the above center; form the ſquare, &c. taking one ſide of the ſquare as a baſe to deſcribe an equilateral triangle, from the ſummit thereof you trace the curvature of the abacus, and all the ſeveral lines of its mouldings. By mere inſpection the poſition of the leaves and volutes, &c. in this plan, may be eaſily made out.

Sometimes the vaſes of Corinthian capitals were made of marble, but ornamented with foliages and volutes of metal, as appears by ſome amidſt the ruins at Palmyra.

In the diminiſhed part of the ſhaft, with its flutings, the diminution is about one eighth part, ſo that thirty-two modulary parts may be taken for the diameter of the ſhaft underneath the capital.

Vitruvius has (*c*) declared it againſt the practices of the ancients, to place mutules, dentels, or modilions, on the declivities of their reſpective pediments. We find the Doric example, plate VI. conformable in this point. But the Corinthian portal, as will be ſeen in the following plate, has modilions upon the declivities of its pediment; the authority is great, being taken from the pediment of the Pantheon, and from other Roman ruins, beſides that of the *Maiſon Quarrè* at Niſmes.

---

tudo, tam magni formentur. Ita his ſymmetriis Corinthia capitula ſitas habebunt exactiones. Sunt autem, quæ iidem columnis imponuntur, capitulorum genera variis vocabulis nominata, quorum nec proprietates ſymmetriarum, nec columnarum genus aliud nominare poſſumus: ſed ipſorum vocabula traducta & commutata ex Corinthiis & pulvinatis & Doricis videmus, quorum ſymmetriæ ſunt in novarum ſcalpturarum tranſlatæ ſubtilitatem. Lib. IV. c. 1.

(*c*) Etiamque antiqui non probaverunt neque inſtituerunt in faſtigiis mutulos aut denticulos fieri ſed puras coronas. Lib. IV. c. 2.

It is true, that the modilions upon theſe declivities cannot be ſaid to be the ſame pieces in their original intention, as the modilions in the level cornice, where they repreſent the ends of the rafters; yet they may repreſent the ends of the purlins; ſome have conceited that the ſides of the modilions ſhould be traced perpendicular to the declivity; this is ſo much againſt the *coſtume*, that it is really ſhocking; but the fronts of the modilions having their ſide drawn down perpendicular to the baſe of the pediment, may be (*b*) accounted for, by ſuppoſing that the ends of the purlins were ſhaped like a lozenge, inſtead of a ſquare, and this figure would be no impediment to their being properly adjuſted in their true places.

PLATE. XIV.

The Corinthian portal here deſigned, is after that of the Poikile in the antiquities of Athens: the niches are added to ſhew how to deſcribe them in ſuch a front, but the larger columns muſt always have the ſmaller niches when ſtatues are intended. The intercolumniations under the pediment, are all equal and narrower than thoſe at the ſides. The columns under the pediment are inſulated, the angular ones have behind them ſquare pilaſters, with the ſame capitals; the pilaſters are not fluted, but all the columns are. The columns againſt the walls project their full diameter, and as much more as is neceſſary to clear their baſes and capitals from the wall: the entablature breaks (*c*) forward over every column; this gives a great richneſs to the deſign, for columns were never intended to have any part of their circumference buried in a wall, and nothing but reaſons of œconomy, which ſo frequently in modern times have diſfigured the grandeſt deſigns, can account for ſuch management; yet it has been aſſerted by ſome late critics, that the entablatures which are thus advanced upon the columns, and retire again into the ſpaces between two columns, are all unnatural, becauſe the edges of a roof can never be imagined to have theſe breaks; now that this practice is not unnatural or falſe, can be thus proved. A column with its entire circumference placed againſt a wall, had better have only its own incumbent entablature break forward, becauſe, did it advance thus over all the intervals, there would be a uſeleſs load at the top of the wall againſt all ſolidity: now the edges of the roof are certainly to be traced rectilinear throughout the whole extent, upon the cornice of the intervals, and the tops of the cornice over the columns left to be adorned with vaſes, ſtatues, &c. The columns with their entablature may be conſidered as ſo many ornamental buttreſſes, which ſtrengthen the wall at two principal points, its foundation and ſummit.

There are eight intercolumniations on each ſide of the portal of the Poikile; we have given half the plan in ſmall, the entire height of whoſe columns, including four feet nine inches for the zoccolo, with its ſtylobates, is nearly thirty-eight feet three inches, the diameter of the column near three feet. At each end of this front, which extends two hundred and fifty-two feet, is a projecting wall, called the pteroma, or wing.

The interior length of the ſides of this famous ruin, is above three hundred ſeventy-ſix feet. The lateral walls ſeem to have been void of any architectural ornament, and to be crowned only with a plain coping. The whole length of the ſide-walls is broken in the middle by a ſquare receſs, and towards the ends by hemi-cycles; the opening of each is about thirty-four feet. They are called the (*d*) Exhedræ; they ſerved for the retreat of the ſelect companies from the crowd, and were furniſhed with ſeats.

(*b*) Et ea probaverunt quorum explicationes in diſputationibus rationem poſſunt habere veritatis. Lib. IV. c. 2.

(*c*) Uti quæ adjectio in ſtylobatis facta fuerit in ſuperioribus membris reſpondeat ſymmetria epiſtyliorum. Lib. III. c. 3.

(*d*) Conſtituuntur in tribus particibus exhedræ ſpatioſæ habentes ſedes in quibus philoſophi, rhetores, reliquique qui ſtudiis delectantur ſedentes diſputare poſſint. Lib. V. c. 11.

Divide

Divide the height from the bottom of the architrave to the floor, into ſeven equal parts, and take five of theſe for the height of the door-way, the breadth whereof is equal to half the height.

The ſummit of the niches, if required, is determined below the aſtragal of the columns, their height is twice and a half of their breadth; they are ſunk in pannels, and have the archivolts and impoſts in character with the order. Another proportion of niches for ſuch a deſign is that, when their ſummits are ranged with the height of the door-way, and their bottom fixed at one third of the height of the entire column; theſe niches would ſuit where the diameter of the column was full three feet.

In this ſame plate is given in ſmall, the plan of a Corinthian octoſtyle, pycnoſtyle, peripteral temple; the ichnography of any other of the ancient temples may be traced, by what has been ſaid on that ſubject.

PLATE XV.

To judge from the beſt monuments of antiquity, the columns of any order (we have excepted theatres and amphitheatres) were ſeldom thrown away upon a range of arcades, becauſe the heavineſs of the piers deſtroy the beautiful effect and intention of columns, which appear with all poſſible advantage when diſpoſed inſulated in a periſtyle. A colonade in this rich and delicate order ſhould always be preferred.

However, there is another ſort of edifice, where columns of this order have been applied to an arcade, the Triumphal Arches: beſides thoſe well known at Rome, there is one of an earlier date, and of a ſuperior ſtyle, we mean the triumphal arch at Orange; it is ſuppoſed to have been erected for the victory of Marius over the Cimbri, one hundred and three years before the Chriſtian æra. This edifice is greatly enriched with ſculpture, all the parts are in fine ſymmetry, and the general effect is very grand and pleaſing.

CHAP. VII.

Of the Apertures of Doors and Windows. Of the Doric, Ionic and Corinthian Dreſſings. Of Venetian Windows.

AN edifice with open intercolumniations, covered over head by the ſoffits of its entablature, united together as a cieling, neither wants doors nor windows; ſuch a building could ſerve but for few purpoſes, and not at all as an habitation; becauſe it would be expoſed on all ſides to the injuries of weather: on the contrary, an edifice incloſed with walls, wants, at certain intervals, apertures for doors and windows anſwerable to the intentions of the requiſite conveniencies.

The various dimenſions of theſe apertures are determined according to the ſcale of the building. The following figures for windows may be deſcribed. 1. A circular window. 2. A perfect ſquare. 3. The diagonal of the ſquare. 4. A ſquare and two thirds. 5. A ſquare and three fourths. 6. Two ſquares. 7. Two ſquares and one ſixth, or one ſeventh, or one twelfth. Too great variety of apertures in the ſame front is not to be recommended.

PLATE XVI.

The ornaments intended to decorate the apertures of doors and windows, are deſigned (*a*) either according to the Doric, the Ionic, or the Corinthian mode of mouldings and profile. For the Doric doors or windows A. A. divide the breadth of the aperture into five equal parts; take one of theſe for the height of the architrave, and for the breadth of the jamb; divide this breadth into twelve equal parts for a modulary ſcale; and if a frize and cornice, and columns are to be added, let the dimenſions of the members and mouldings be regulated by that ſcale according to the rules already given, and the figures deſcribed in this plate.

For the Ionic window B. divide its breadth into ſix equal parts; the breadth of the jamb is equal to one of theſe, which divided into eighteen modulary parts, will ſerve as a ſcale to determine all the members, according to the Ionic diſtribution. The pediment is traced in the manner already preſcribed. The architrave and jambs have two facias, and the diagonal of the little ſquare of the undermoſt facia in the architrave, prolonged as ſeen in the figure, by the dotted lines, determines the knee of the jamb.

For the Corinthian window C. divide the breadth of the aperture into ſeven equal parts, and take one for the breadth of the jamb and the height of the architrave; the ſeveral members of both, as well as the frize and cornice, are traced from a modulary ſcale of one of the above ſeven parts ſubdivided into eighteen parts; ſuch particulars being obſerved as are characteriſtic of the Corinthian order. The length of the truſs or ſcroll (*b*) is continued below the aperture half of the height of the architrave; but the foliage at the bottom of the leſſer ſcroll deſcends ſtill lower: the breadth of the truſs in front is three fifths of the jamb, and the profile or projecture of the larger volute is equal to one and one half of its front.

Doors, and even windows, are frequently adorned with an order of columns; which become very rich decorations, as may be obſerved in the front of the Palazzo Braciani, near the S. S. Apoſtoli at Rome, and at the tabernacles within the Pantheon. When this ſort of dreſſing is intended, ſet off from the ſill of the window, upwards, the height of the propoſed column, ſee fig. D. divide this altitude agreeably to the intended order, and finiſh the entablature accordingly, obſerving, however, that it is beſt to omit mutules, dentels, and modilions in the cornices of the orders when uſed for theſe purpoſes, becauſe they turn out in general too minute, and cannot take place in ſuch ſituations with propriety.

To the windows already mentioned, we ſhall add the Venetian Windows: theſe are adapted to ſtair-caſes, or to ſuch rooms as require a different diſtribution of the apertures, or more light than can be obtained from the breadth of one, of two, or of three of the uſual apertures. The ſymmetry to be regarded in one of theſe windows, is, that the breadth to each ſide, be either one fourth, one or two thirds, or one half of the middle aperture, according as this may be furniſhed with three or four panes in breadth.

Sometimes the architrave of a Venetian window is deſcribed to range in a right line, as the figure E. And if the middle is required to be circular, by tracing the archivolt and entablature, ſee

---

(*a*) Oſtiorum autem & eorum antepagmentorum in Ædibus hæ ſunt rationes, uti primum conſtituantur, quo genere ſunt futuræ. Genera ſunt enim thyromatoon hæc, Doricum, Ionicum, Atticurges. Lib. IV. c. 6.

(*b*) Ancones ſive prothyrides vocentur, exculptæ dextra ac ſiniſtra præpendeant ad imi ſupercilii libramentum præter folium. Lib. IV. c. 6.

ſee fig. F. the corona, cyma, &c. as in the former, will range in the ſame line with the entablatures of all the other windows upon the ſame floor.

By fig. G. is given the greateſt breadth that can be allowed to a Venetian window, as it ſtands in relation with the ſeveral figures deſigned in this plate.

Strange abuſes of Venetian windows are ſeen in ſeveral great as well as ſmall buildings: a principal error is, when the archivolt appears to cut into the floor above it; it is likewiſe a fault to cauſe the archivolt to ſpring from the cyma of the cornice, this makes the middle aperture too lofty, and the ornaments of a cornice are improper for the impoſts of an arch, and therefore the arch ſhould always take it's riſe from the architrave.

A venetian window deſigned in a hemi-cycle, or in a leſſer ſegment of a circle, becomes what is commonly called a bow-window; it is alſo often deſcribed within the plan of a ſemi-exagon.

The only inſtructions to be drawn from the regulations of the antients concerning doors, are firſt, not to place inſulated pedeſtals under columns; a practice they generally avoided, otherwiſe ſome rules would occur relating to doors, under ſuch circumſtances; Palladio, in his fourth book, mentions the temple of Sciſi in Umbria, as the only one he ever knew with inſulated pedeſtals: and ſecondly, to make uſe of the decorations of the different modes; which alſo are intended to characteriſe three ſorts of doors, and thus they may be deſigned with much grace and beauty.

The reaſon why the antients preſcribed the upper part of the aperture, and of the door to be narrower (*c*) than at bottom, was evidently to make it ſhut of itſelf; the door and windows of the temple at Tivoli are after this manner. It is difficult to hit upon any other conjecture in favour of this practice, which muſt be cenſured as offending againſt the very principles of ſolidity.

CHAP. VIII.

Some parallel remarks upon the three Grecian Orders as deſcribed by Vignola, Palladio and Scamozzi.

WE have ſelected theſe three authors, as the maſters whoſe writings, deſigns and edifices, are moſt commonly known, and are of the beſt modern authority.

PLATE XVII.

I. The Doric by Vignola. This author has taken for his model the Doric, from the ruins of the theatre of Marcellus at Rome, but without an exact adherence to the original. The cornice is made equal to the frize, which it ſhould not be, and he has altered the meaſures of ſeveral of the members and of the capital, not at all advantageouſly. The dentels, which he has alſo adopted from the ſaid ruins, exhibit an impropriety not to be imitated, becauſe they are the ſpecific members of the Ionic; this author indeed has alſo deſigned another Doric entablature with mutules, but they are too heavy, and have too many drops. In both, the cornices are too high, and project too far; and the architraves are too low. The height of the intire column is eight diameters, which exceeds greatly what it ſhould be allowed even with a baſe. We have omitted the pedeſtals for this and the following orders, but we cannot help obſerving, that Vignola is remarkably faulty

(*c*) Et in ſummo contrahatur ——

Reliqua quo altiora erunt (XXX pedibus) ad perpendiculum videntur oportere collocari. Lib. IV. c. 6.

in the relation, the heights of his pedeſtals have to the columns they ſupport. The height of the ſhaft is ſeven diameters. The meaſures in this and the following plates, are by minutes; ſixty being equal to the diameters of every column.

II. PALLADIO is ſaid to have compoſed his Doric order from ſome fragments which are mentioned as having been found at the Baths of Diocletian at Rome; he has with reaſon rejected the dentels: the cornice, whoſe members are well proportioned and profiled, is made of leſſer altitude than the frize, as it ſhould be, but the mutules are omitted; the architrave is too low, and ſhould conſiſt but of one facia.

Being obliged to fall into the modern vulgar error of giving a baſe to the column, he has yet out of reſpect to the antients very diſcreetly delineated an intercolumniation without baſes; but he has done wrong in chuſing the attic baſe, by far too delicate for this column; and moreover, in allowing on ſuch occaſion a greater height to the ſhaft of the column, which alters its very property. He is alſo blameable for having deſcribed twenty four flutings which turn out too ſmall, inſtead of twenty. The height of the ſhaft of the column is ſix diameters and a half to ſeven diameters and one ſixth.

III. SCAMOZZI has deſigned his Doric order different from the two already noticed; and upon the whole, it is much inferior in elegance of profile and choice of members, the entire column is allowed eight and a half diameters. The baſe is attic, whereof the two tori are improperly enriched with foliages, &c. Under the quarter round of the capital, he makes a ſmall fillet, and a cyma reverſa, inſtead of the three annulets truly characteriſtic, according to Grecian examples and the precepts of Vitruvius. The architrave is to be commended for being made higher than in the former two examples, but it ſhould not have been divided into two facias. The frize is the ſame as the two former, with the unmeaning ſemi-metope ornamented with huſks and flowers. The cornice is heavy and moſt wretchedly profiled, having alſo thoſe ill choſen dentels, which become ſtill more diſagreeable by being more diminutive than thoſe of Vignola; for was this member to be received in a Doric cornice, it ſhould not be leſs than the ſame when aſſigned to the Ionic. The column has twenty-four flutings, which inſtead of being diſtinguiſhed by ſingle obtuſe edges, are traced with fillets only ſuitable to the Ionic and Corinthian modes of fluting. The height of the ſhaft is ſeven diameters and a half.

IONIC ORDERS IN THE SAME PLATE.

I. The IONIC ORDER BY VIGNOLA. The whole entablature is too heavy, eſpecially the cornice, though it is well profiled, in the true character, and has the dentels; but inſtead of the pine bud for the external or internal angle, it would be better to furniſh them with a dentel. The architrave ſhould be divided only into two facias, and the frize ſhould not be higher than the architrave.

The Capital of the column is too little, and the eye of the volute is ill placed: the baſe, perhaps very injudiciouſly concluded to be the Vitruvian baſe, has been univerſally condemned; the attic baſe ſhould have been preferred: it ſerves for this order in the temple of Fortuna Virilis, the theatre of Marcellus, and the Coliſeum. The height of the ſhaft is eight diameters and one ſixth.

II. PALLADIO makes the entire entablature of this order too low; the profile is well delineated, excepting the pulvinated or ſwelling frize, ſince it anſwers better with a flat ſurface. The architrave ſhould only be divided for two facias. The capital has the eye of the volute placed lower than that of Vignola, whereby it appears more graceful; upon the whole, it is a beautiful compoſition The height of the ſhaft is eight diameters and minutes 10½.

III. SCAMOZZI has made the entablature of this order ſtill lower than the preceding one, and has alſo choſen modilions inſtead of dentels for the cornice; the profile of which is in a dry, little manner; like the above two maſters, he gives three facias to the architrave, but the frize is left flat.

The

The volute of this author is particular; it ſeems to be partly taken from the temple of Concord; he has intended that all the ſides of the capital ſhould be the ſame as the front; for this purpoſe they bend inwardly towards the middle on every ſide; thus the bolſters are omitted, which are deſcribed for the ſides of the antique favourite volute: the hem or fillet of the volute, ſprings very unnaturally out of the ovolo, and is more properly traced rectilinear under the abacus. The volutes are more maſſive than either of the former two, which is rather in their favour. The height of the ſhaft is ſeven diameters, and minutes 56½; like both the former it is too high.

PLATE XVIII.

I. VIGNOLA ſeems to delight in heavy entablatures; even for this moſt light and delicate order, the Corinthian, he makes the entablature one fourth of the height of the entire column; thus the cornice becomes exceeding weighty, and its projecture too conſiderable: the modilions are too long, which gives them an aukward profile, and they interfere with each other in the internal angles of an edifice: hence alſo it ariſes, that the boxes or coffers in the ſoffit are not ſquare. It is deemed an abuſe to have dentels and modilions in the ſame cornice; and therefore, whenever a tænia is to be traced in the ſame cornice with the modilions, it ought not to be divided into dentels; for ſuch a practice is not raſhly to be imitated, though we have ſome great examples both ancient and modern to countenance it. The cornice of the Pantheon is a ſufficient guide, where it was left plain for this very cauſe, that the reaſon of the thing does not in truth allow it.

The capital is well delineated with ſuitable foliage; the baſe of the column is peculiar and beautiful, and whenever the attic baſe is uſed for the Ionic, this may be uſed for the Corinthian column, in order to avoid a dull repetition of the ſame baſes, for two different orders in the ſame deſign. The height of the ſhaft is eight diameters and minutes 20.

II. If the former artiſt has run into an exceſs for the height of the entablature, PALLADIO in the Corinthian, as well as in the laſt, has given two little height to his entablatures; though the columns, as they become more ſlender, require more to be diſcharged of the incumbent weight; yet this ſhould be ſo managed as not to run into a littleneſs of parts. The profile and members of this entablature are well deſigned, only it is proper to exclude the dentels, as before obſerved. The architrave might be traced higher, which would rather prove advantageous. The height of the ſhaft is ſeven diameters, minutes 50.

III. SCAMOZZI has ſucceeded better in the deſign of the Corinthian order than in the two former; the profile upon the whole is well deſigned, he has omitted the tænia or platband in the cornice, leſt it might tempt the workmen to cut dentels thereon, which he highly diſapproves in the ſame cornice with modilions. The column with its capital and baſe is nearly like the former, the height of the ſhaft excepted; this height being fixed at eight diameters and minutes 20.

CHAP. IX.

Of placing one Order upon another. Of Cornices for the ſummit of Buildings. And of Cornices and Cielings for Rooms.

THERE may be ſeveral occaſions wherein an architect would be required to place one order above another; the antients for their dwelling houſes, their baſilicas, their theatres and other public buildings, contrived to diſpoſe columns in ſuch a manner: the columns

columns of the upper order ſhould always be leſs than the columns (*a*) they ſtand upon, and at the ſame time muſt have a ſufficient degree of ſolidity and ſtrength. The neceſſity of which is demonſtrable, ſince the inferior ones ſupport the ſuperior columns, and the weight they bear is greater than what is incumbent upon the ſuperior columns: therefore they muſt be ſtronger and leſs delicate than the ſuperior ones, but as theſe have alſo their incumbent weight, they alſo muſt yield a ſolid bearing,

And as the appearances of things are to be obſerved in the aboveſaid diſtribution, it is uſual to place the Doric order undermoſt, the Ionic next, and the Corinthian above the Ionic; ſometimes a baſement, with or without arcades, ſupplies the place of a lower order.

Whatever may be collected from the writings of Vitruvius, or the remains of antiquity, or from the edifices of the beſt moderns, we can gather but very uncertain rules about the relation which the lower and upper orders are to bear to each other. Palladio in his deſigns, for the convent of la Carita at Venice, has obſerved the following meaſures in placing the three orders one above the other in the cloiſters. The firſt is Doric, the diameter of whoſe column is two feet three inches; the next is Ionic, to whoſe column he gives one foot ten inches in diameter; the laſt and uppermoſt order is Corinthian, whoſe column meaſures one foot ſix inches in diameter. The baſes of the Ionic and Corinthian columns, ſtand upon a plinth to raiſe them above the inferior cornices. The third order is without arcades. In this building, ſays Palladio, I have endeavoured to imitate the houſes of the antients, and have therefore made a Corinthian atrium, or veſtible to it; the order of this is equal in height to both the Doric and the Ionic of the cloiſters; and upon the entablature of this great order is a balcony to a terrace which goes round for a communication of the apartments of the third ſtory. We have ſelected this example on account of its ſimple and well choſen diſpoſitions, inſtead of the three orders in the court of the palace Farneſe, which abounds in many beautiful particularities, though crowded with miſtakes.

But ſince Vitruvius informs us, that when columns are placed one upon another, their apparent diminution ought to reſemble that of the trunks of tall and beautiful trees, we may draw this concluſion, that the leſſer diameter of the inferior columns may be equal to the greater diameter of the next ſuperior column, and ſo continued upwards; this method is found to anſwer as well as any other that can be propoſed.

The orders, as deſigned in plate I. might take place one over another, in a building whoſe height was divided into three equal parts. The undermoſt being divided again into eight would produce the Doric. The next diviſion being for the Ionic, muſt conſiſt of ten equal parts, and the laſt or higheſt diviſion, being for the Corinthian, of twelve equal parts; the modulary ſcale to each order will ſerve to determine the ſeveral members, as already has been ſhewn. By this method, the diminution of each inferior order, is rather more than the greateſt diameter of the next inſiſtent order as it ſhould be.

According to the wiſe practice of the antients, nothing but a Corinthian order ſhould take place, when a fourth order is required, which being of leſſer diameter, would ſtill become more delicate than the former.

The placing of the orders one above the other, gave riſe, about ſeventy years ago, in France, to a queſtion as vain and ridiculous as it is uſeleſs; whether it was not poſſible to invent a ſixth order to be added above the Compoſite, and to ſurpaſs it in richneſs and beauty, as much as this was thought to excell the others? this new prodigy was to be named the *French order*; it was propoſed

---

(*a*) Columnæ ſuperiores quartâ parte minores, quam inferiores ſunt conſtituendæ; propterea quod oneri ferendo, quæ ſunt inferiora, firmiora debent eſſe quam ſuperiora. Non minus quod etiam naſcentium oportet imitari naturam, ut in arboribus teretibus, abiete, cupreſſo, pinu, e quibus nulla non craſſior eſt ab radicibus: deinde crefcendo progreditur in altitudinem, naturali contractura peræquata naſcens ad cacumen. Ergo ſi natura naſcentium, ita poſtulat, recte eſt conſtitutum, in altitudinibus & craſſitudinibus inferiorum fieri contractiora. Lib. V. c. 1.

poſed by command of the monarch to all the architects upon the globe, with a promiſe of a conſiderable premium to any who ſhould be ſo *happy* as to produce a deſign of a new order worthy to be called by ſo *glorious a name*. Immediately the ſkilful artiſts of every country, exerted all their talents to accompliſh the deſired end, and gain the prize; but, ſtrange it is to relate! it happened, that out of a million of different deſigns delivered in, not even a ſingle one came to hand which deſerved applauſe: according to M. Blondel, moſt of them were extravagant compoſitions, filled with Gothic chimæras or flat alluſions. M. Belidor, however, has flattered his countrymen with the *probability* that ſome future genius will ſucceed in the attempt; one would imagine that ſo ſkilful an engineer was better acquainted with the doctrine of chances.

A building that finiſhes without an entablature, or without a cornice, has a poor and naked appearance, notwithſtanding the other parts of its front are tolerably dreſſed. In moſt common caſes, cornices, with the leaſt projecture, are preferable, becauſe the waters from the roof are received into the gutters and carried downwards through pipes.

To proportion cornices to any required height, divide the ſaid height according to the directions preſcribed in each entire order, and then from the modulary ſcale ſet off the component parts of the intended cornice, which are to be profiled, agreeably to the members prevalent in the character of the order. The cornices for chambers, and for the other internal parts of an edifice, with ſuitable cielings, are two conſiderations worthy of notice: in both theſe, two taſtes have prevailed in Europe; Italian deſigns, wherein the mouldings are well choſen but heavy, and the compartments truly deſigned, but faulty through too much regularity and ſameneſs; the French, fond of lightneſs and novelty, have on the ſame occaſions hitherto dealt in crotchets and zig-zag; but it muſt be owned, that herein the national taſte has prevailed againſt the judgment of ſome of their ableſt artiſts.

The cornices for rooms ought to have very little projecture, and their mouldings may be deſcribed and ornamented after the antique manner, which will admit of an infinite variety; we can trace in Ovid's tomb, the ruins of Herculanum, Stabia, Pompeia, &c. the taſte of the antients for the decorations of the compartments of cielings and walls; but it requires a diſcerning, as well as an inventive genius, to make a proper choice in theſe matters: to carry them into execution will demand the ſkill of the ableſt artiſts; becauſe an indifferent performance would be attended with loſs of time, and money, beſides diſcrediting the judgment of the owner.

We have ſlightly touched upon the laſt mentioned ſubjects, rather to give a ſuitable caution than to enter into any informations, which at preſent would be foreign to our intentions.

THE END OF THE GRECIAN ORDERS.

N REMARKS


IN
CARNEOLA
ΣΩΚΡΑΤΟΥ

DORIC Module

ION: & CORINTH: Module

II I

Doric Division by 12 parts

Ionic & Corinth: by 18 parts

A B

Entablature

Cornice

Frize

Architrave

Capital

Entire Column

First or Shaft of the Column

Cable Fluting

Base

Ground Sill

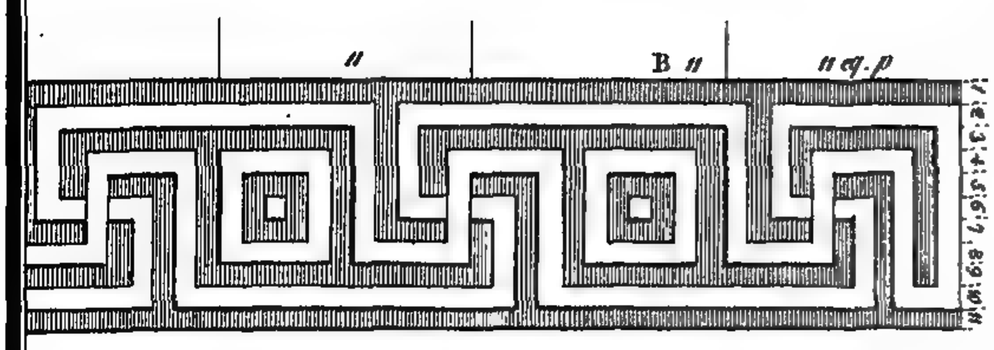
II Modules

II Modules

II Modules

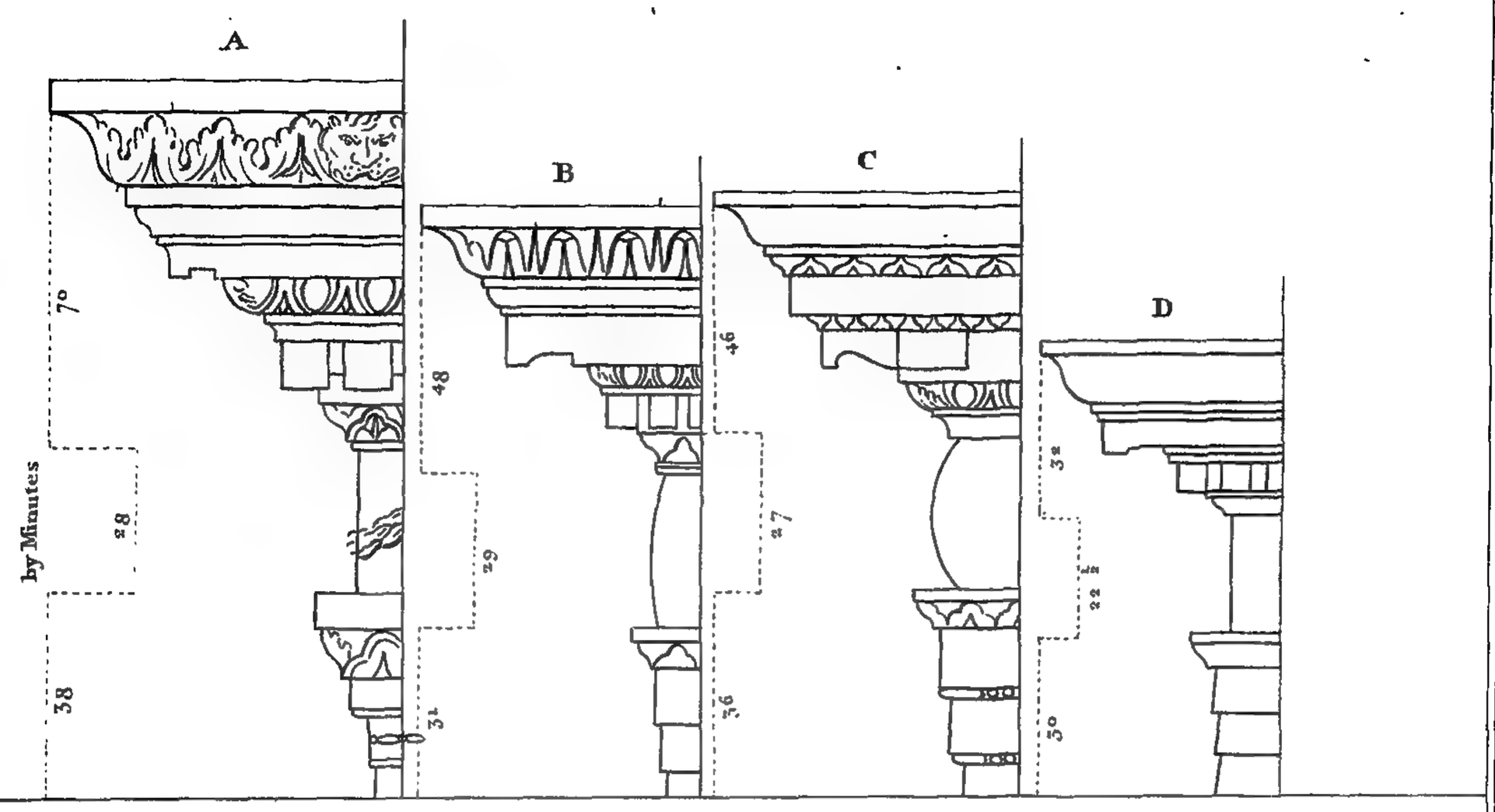
Semi Plans of the Bases

S. Riddell 1767



S R del. in 1767

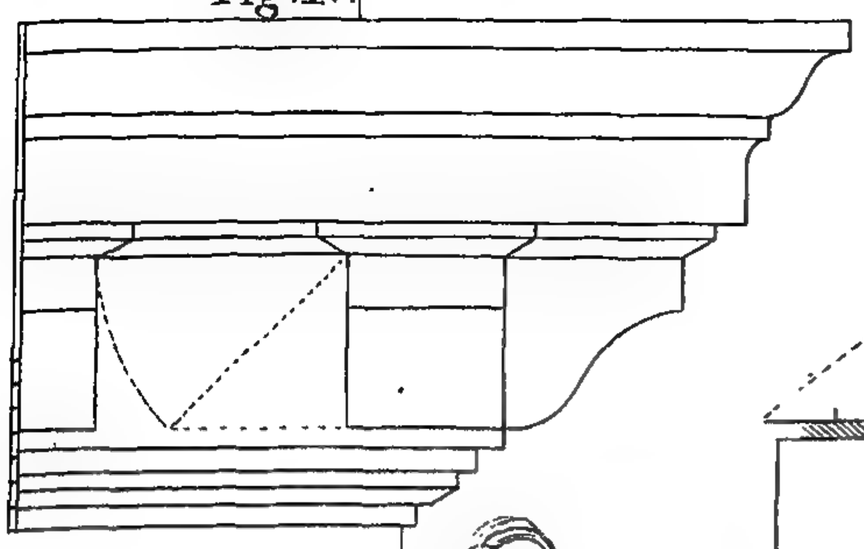
Daviler's Comparison of PROFILES.

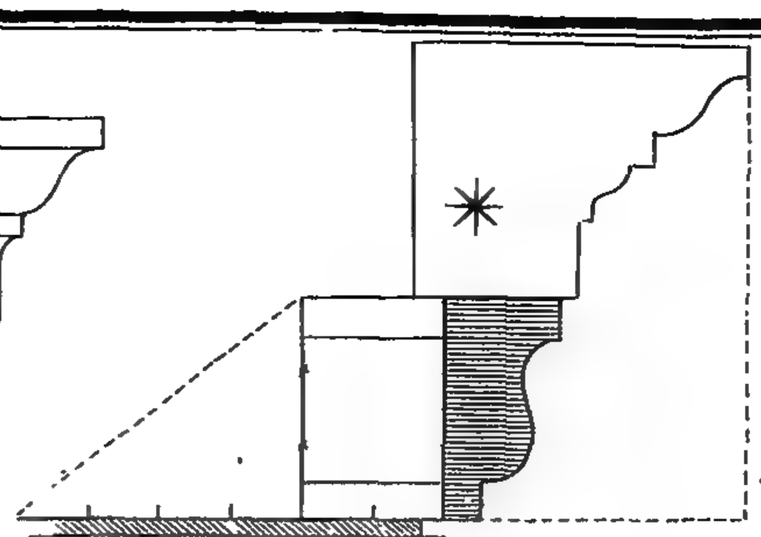


GRECIAN Intercolumniations

S R. delin 1767

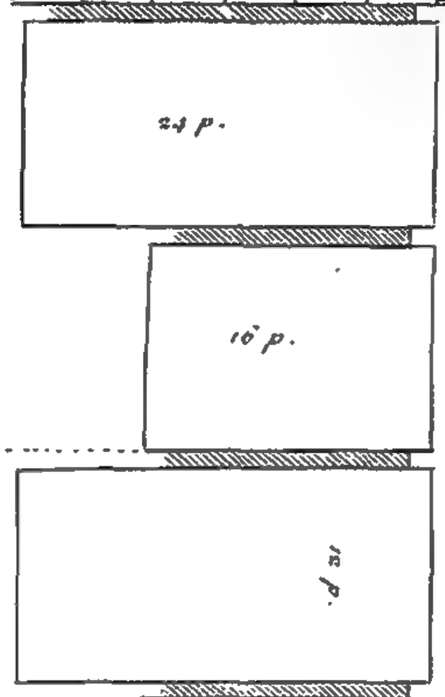
Fig. IV.

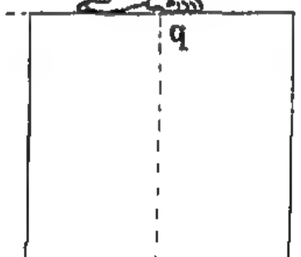












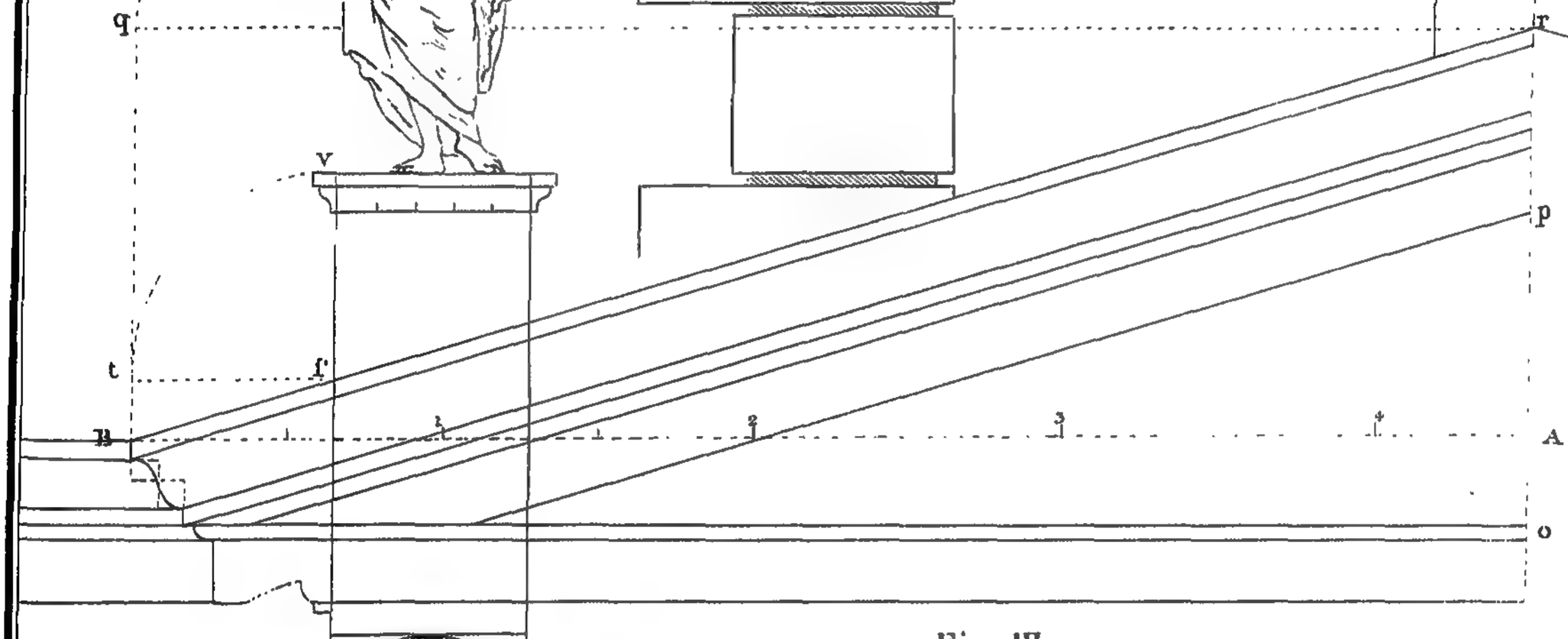


Fig. III.

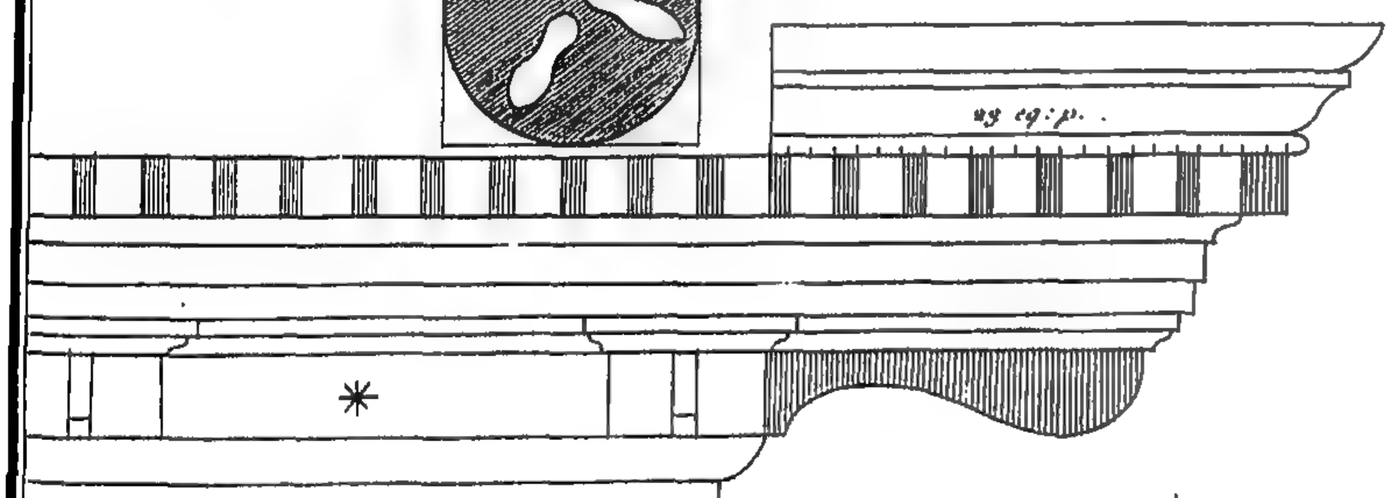


Fig. I.

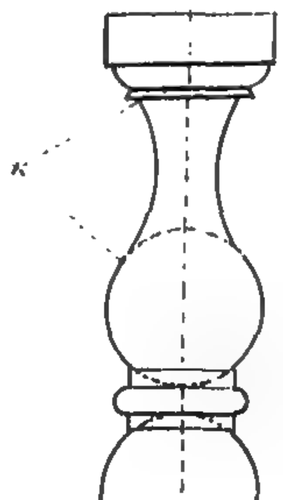


Fig. II.

Fig. V.

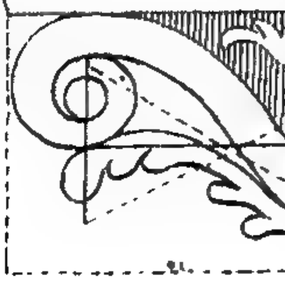


Fig. VI.

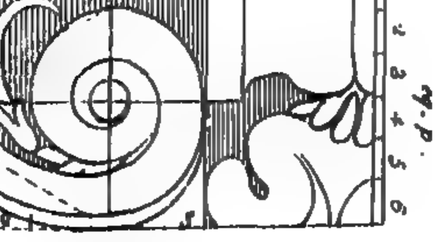
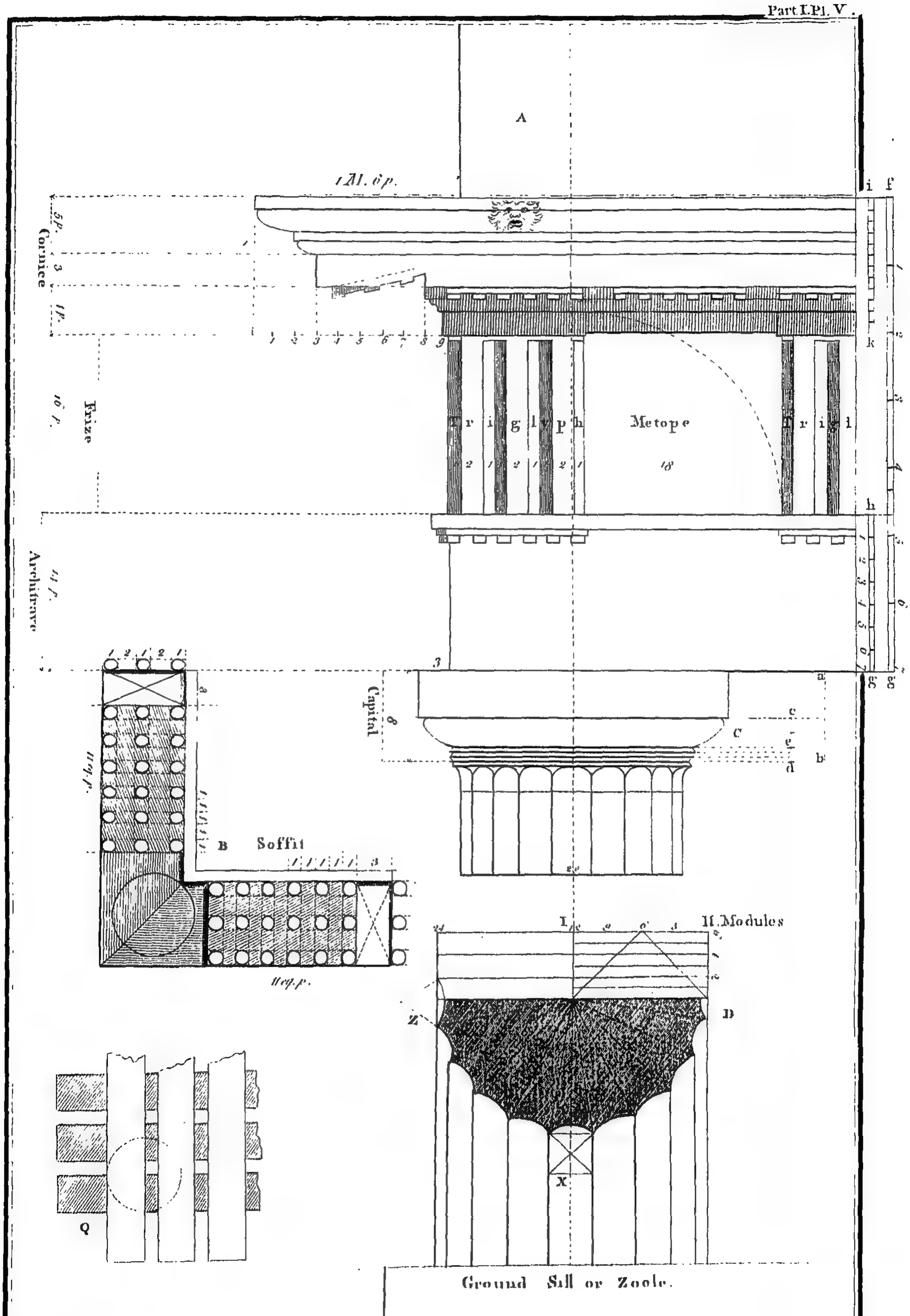


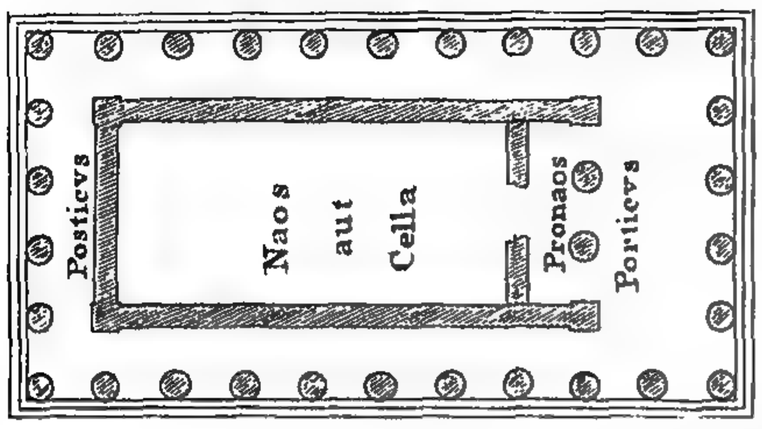
Fig. VII.

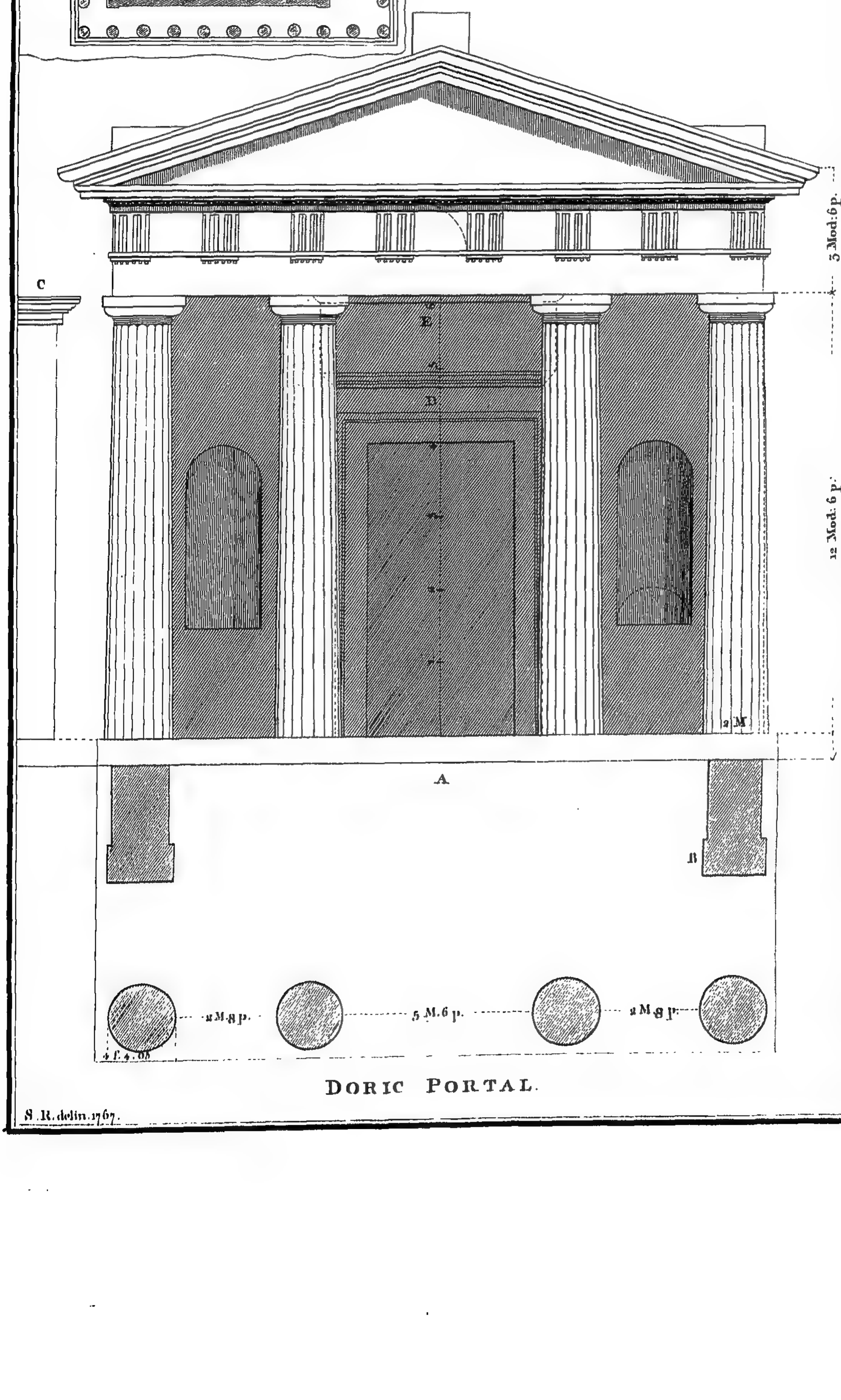
S. Radelin: 1767.



S. R. delin. 1767.

The Plan of a Doric Hexastyle Pycnostyle Peripteral Temple.

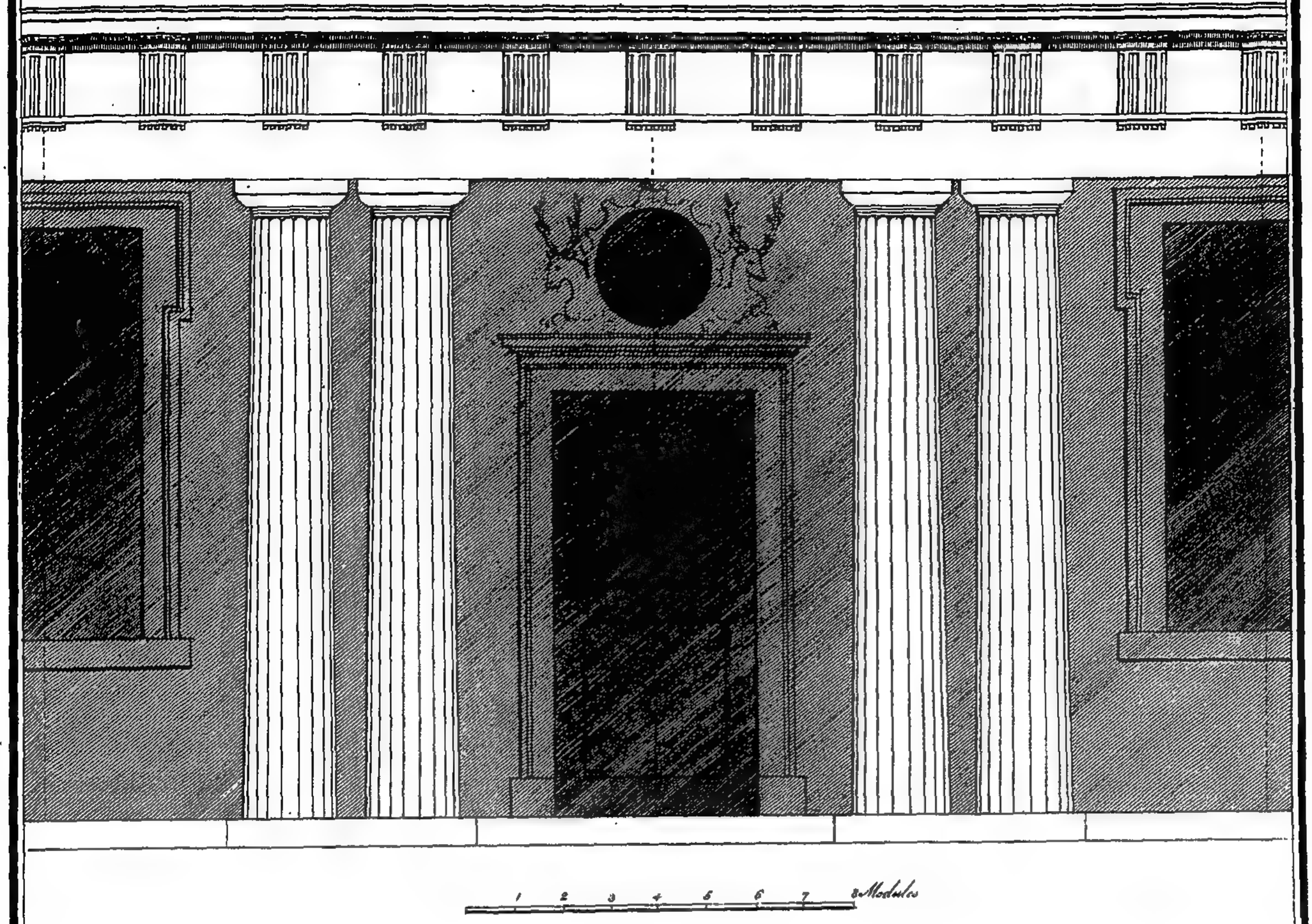




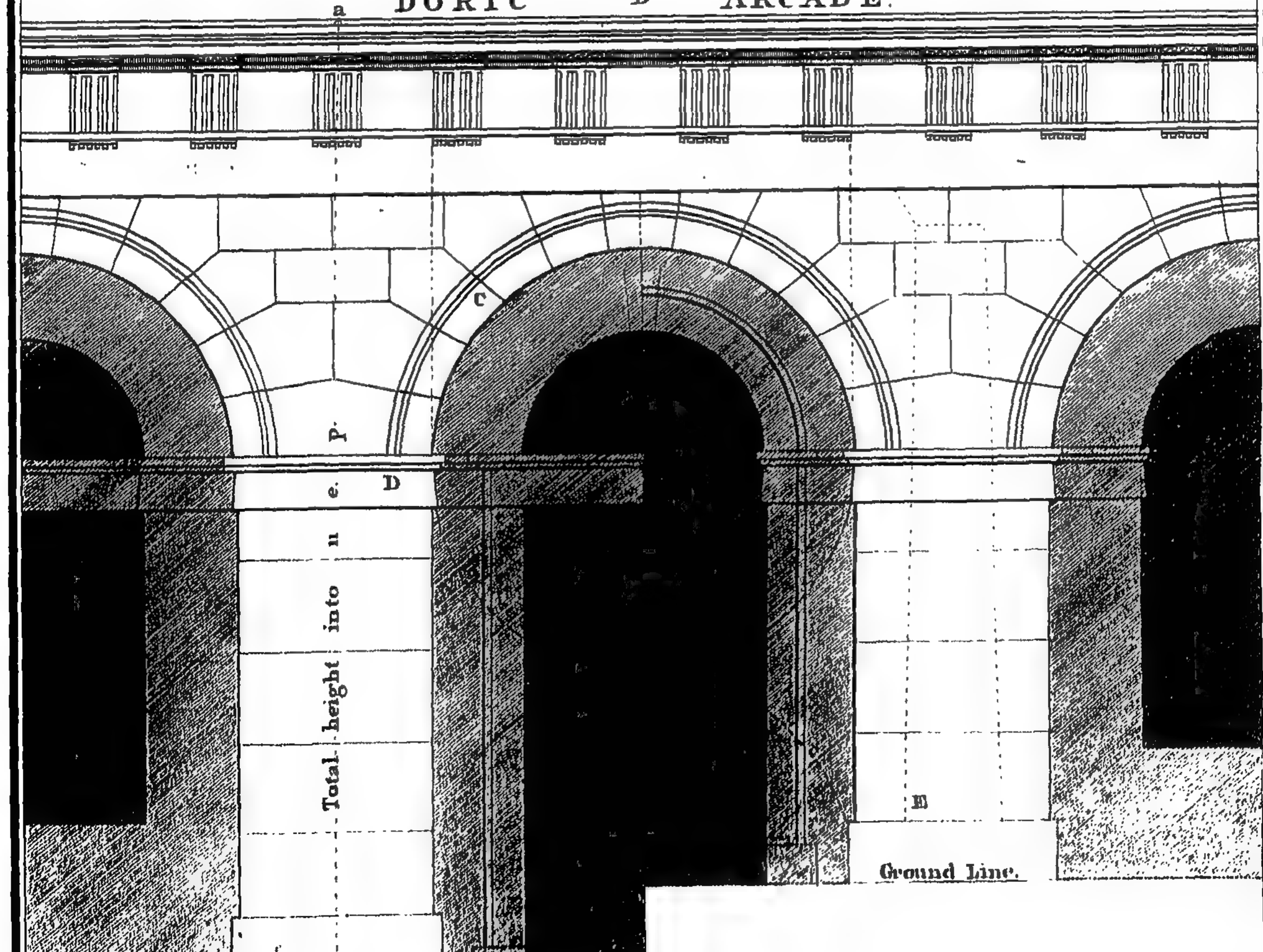
DORIC PORTAL.

S. R. delin. 1767.

DORIC A COLONNADE.



DORIC B ARCADE.



Part I. Pl. VIII.

M

Fig. A

Fig. B

28 20 24

30

9

16 4 4

Soffit

3

3

27

9

18

Cornice

Frize

27

27

Architrave

C

5 2

14 9

Cornice

Trunk or Die of the Pedestal

B

Base

Sub Plinth

II Modules

I 18

36 P.

F

G

18

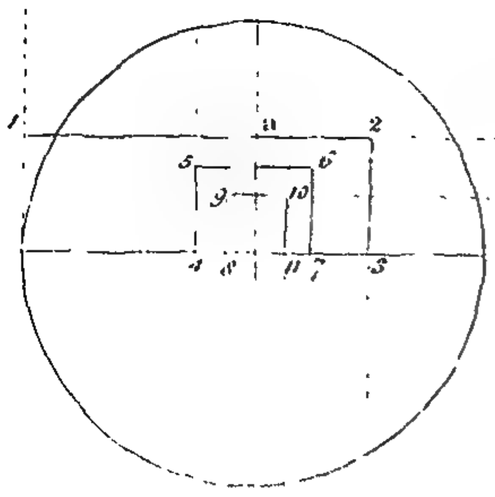
E

K

D

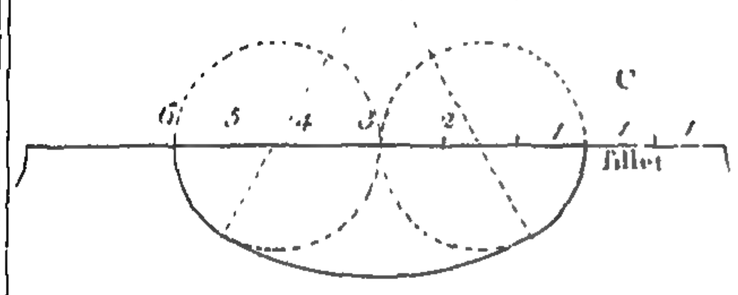
3 R. delin. 1767.

Eye of the Volute



Abacus

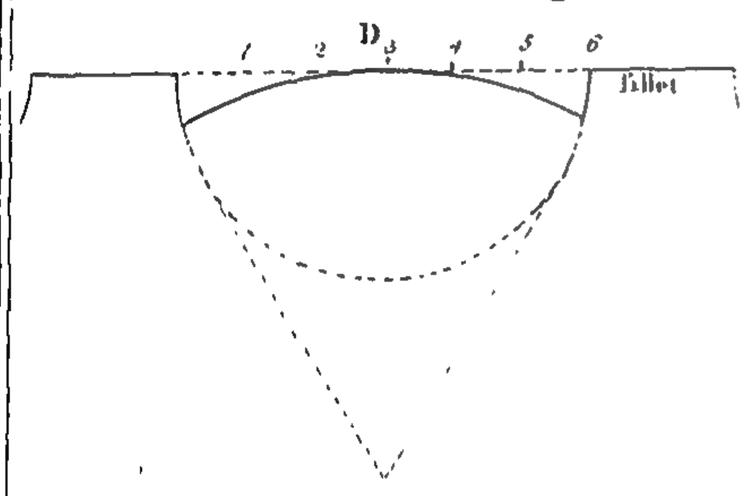
Ionic Fluting



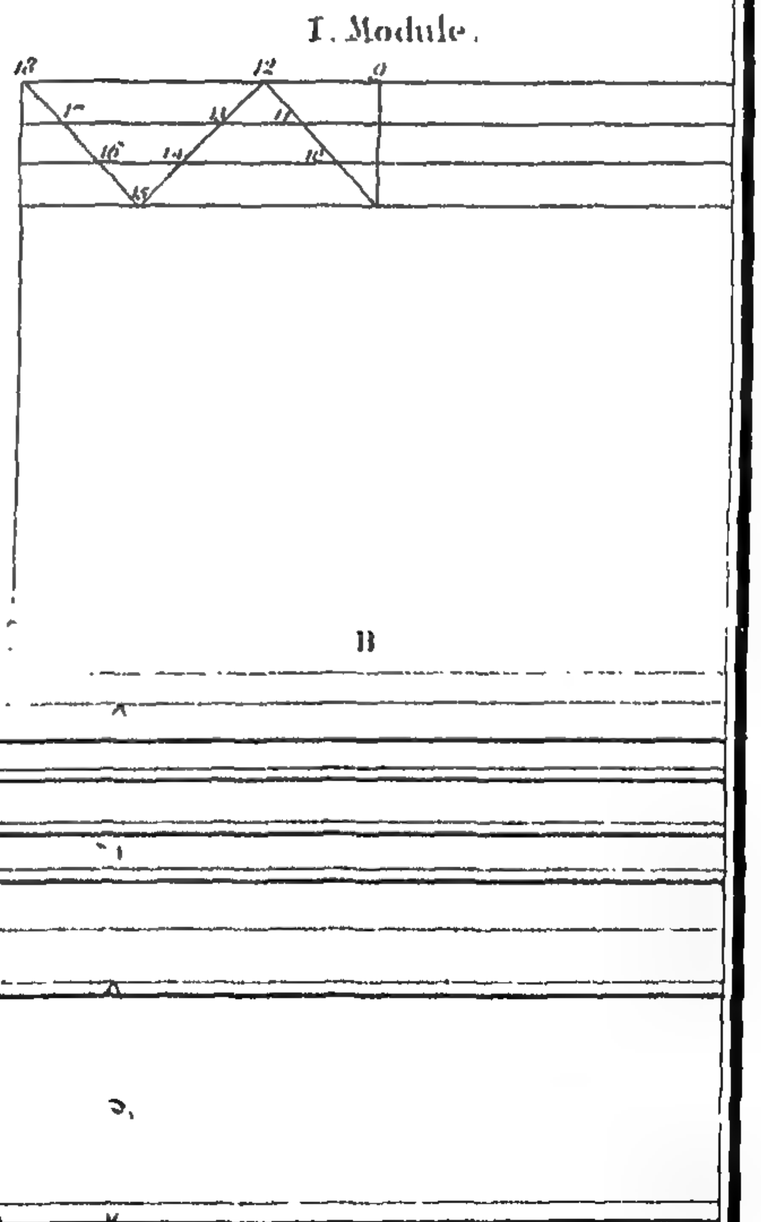
Cathetus

A

Corinth. Cable Fluting.



I. Module.



B



Fluted Blasters.

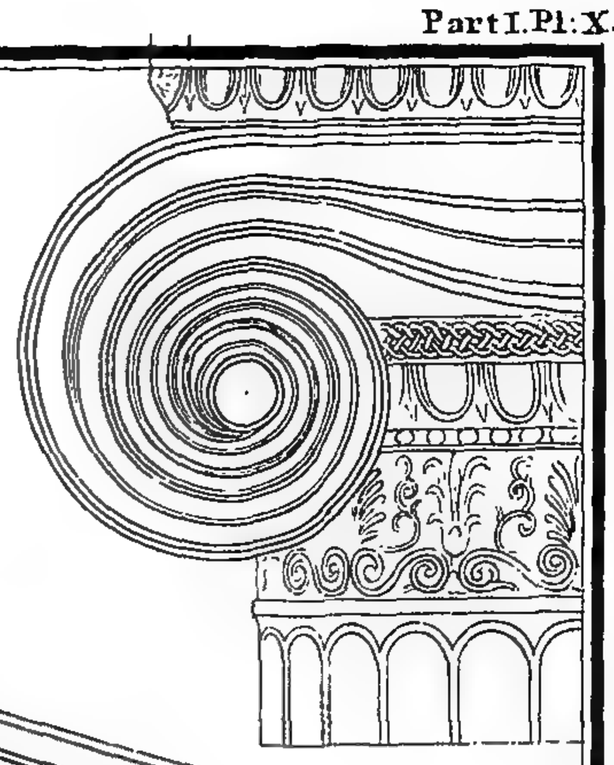


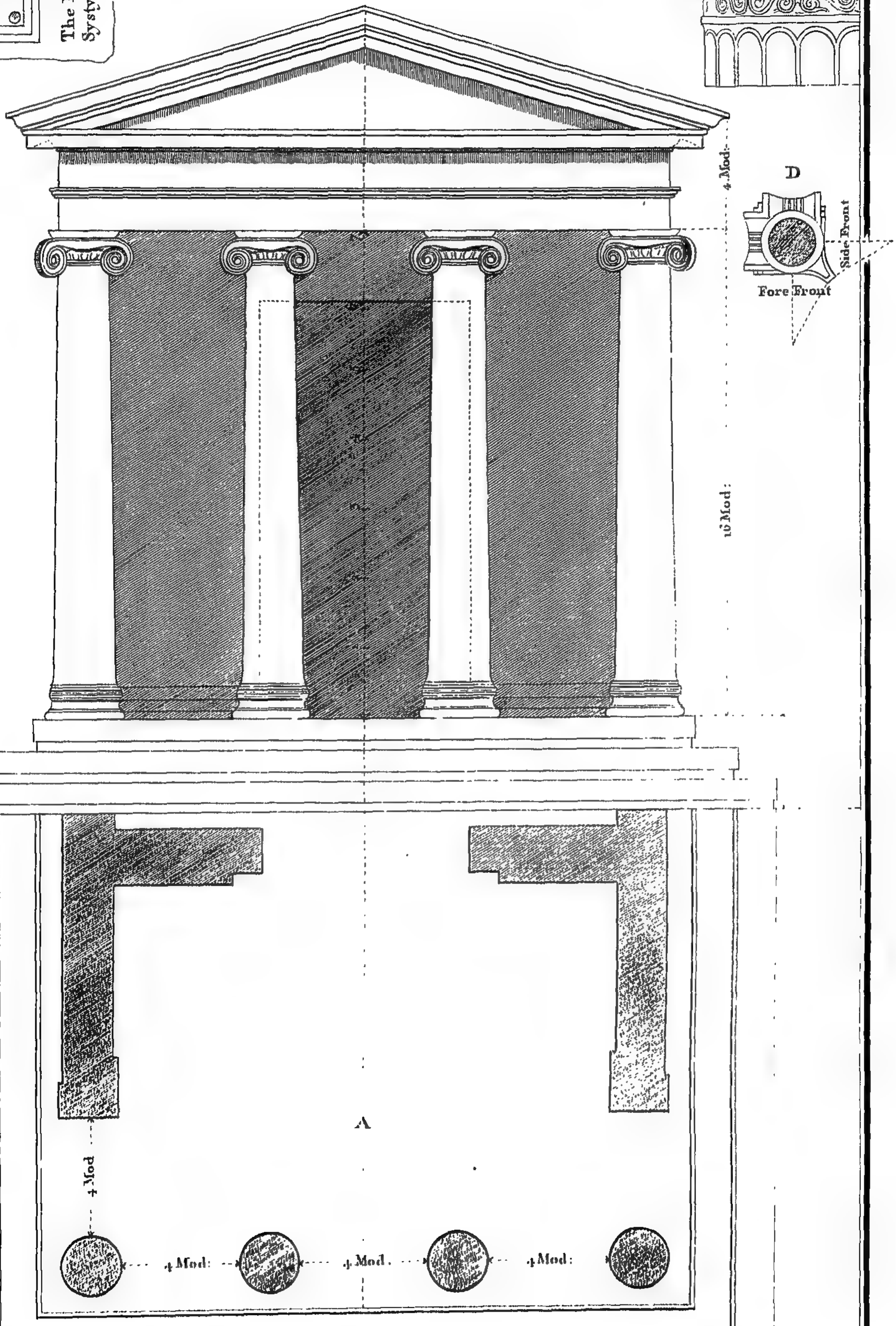
S. Rebelo. 1767.



The Plan of an Ionic, Tetrastyle
Systyle Amphiprostyle, Temple.

IONIC PORTAL.





S.R. delin: 1767.

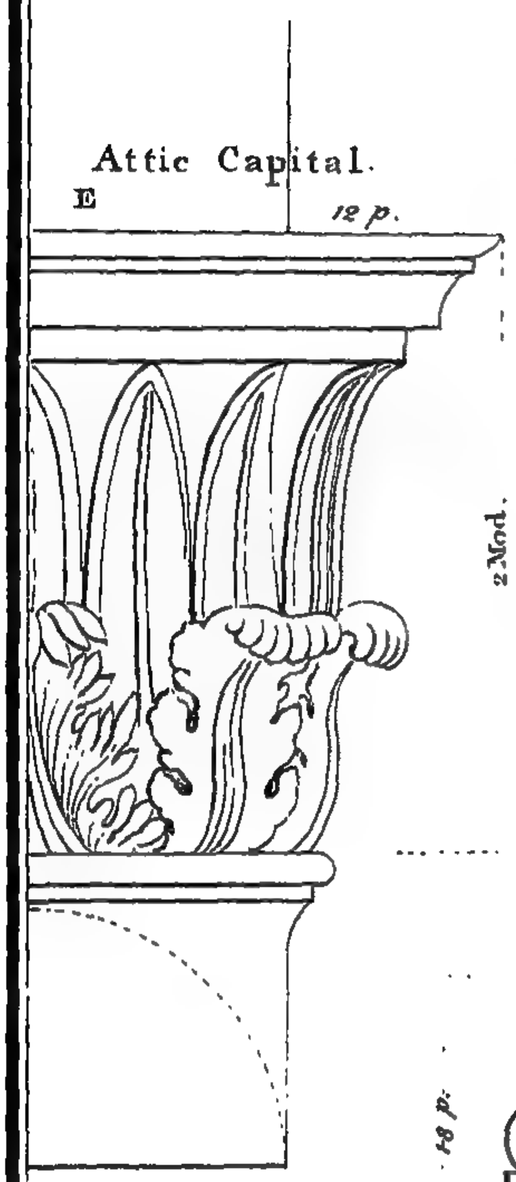
IONIC COLONNADE with PEDESTALS

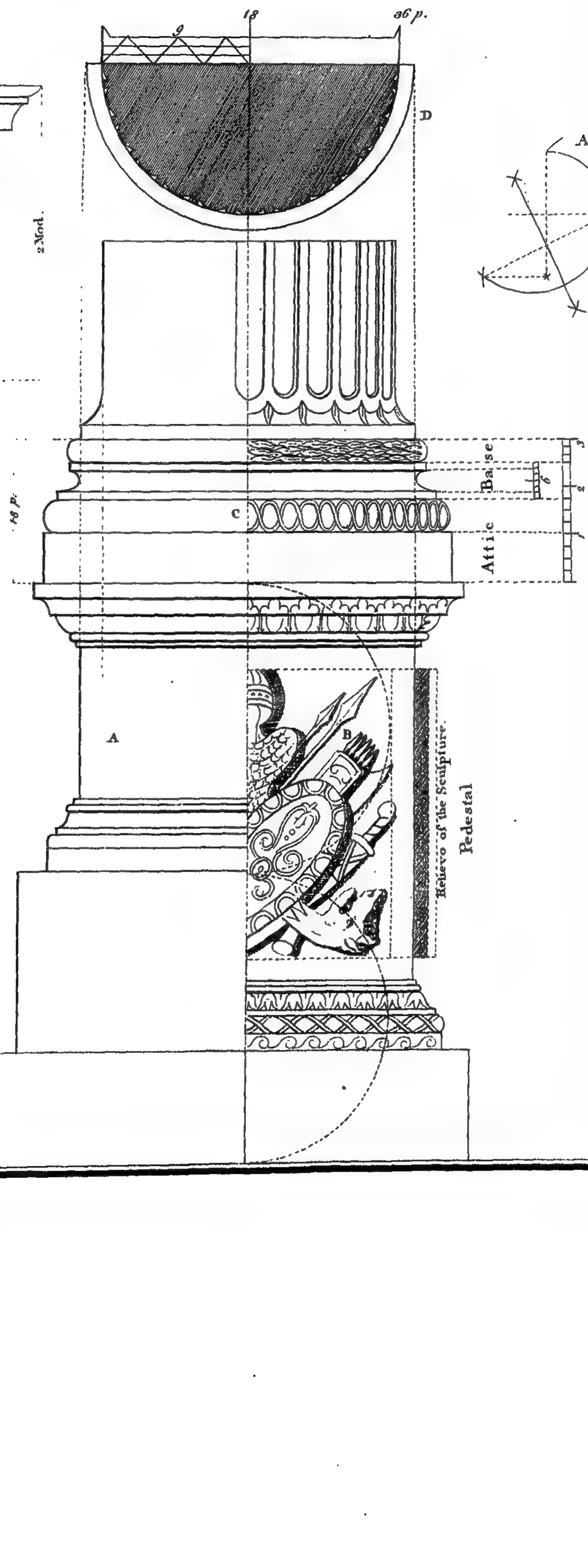
and PODIVM.

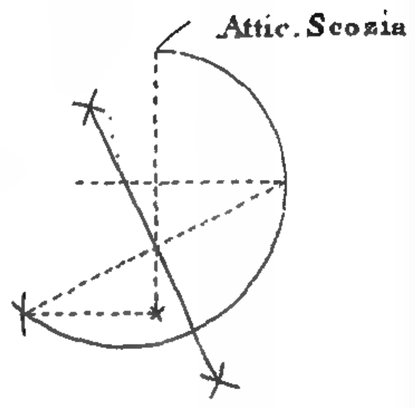
S. R. delin: 1767.

II. *Modules.*

Attic Capital.







S. R. delin. 1767.

M. p. 1. 9

A

C

M. p. 1. 6

Cornice

Frize

Soffit

D

Soffit B

E

Olive

Laurel

Acanthus

Plan of the Capital

M. Modules

S.R.delin:1767.

Pycnostyle Amphiprostyle Peripteral Temple

Plan of a Corinthian, Octostyle

Pteron or Wing

Naos aut Cella

Pronaos

Posticus

Porticus

3 feet

nearly 105 feet.

Semi Plan of the Front of the Poikile.

6 M. 6 M.

4 M

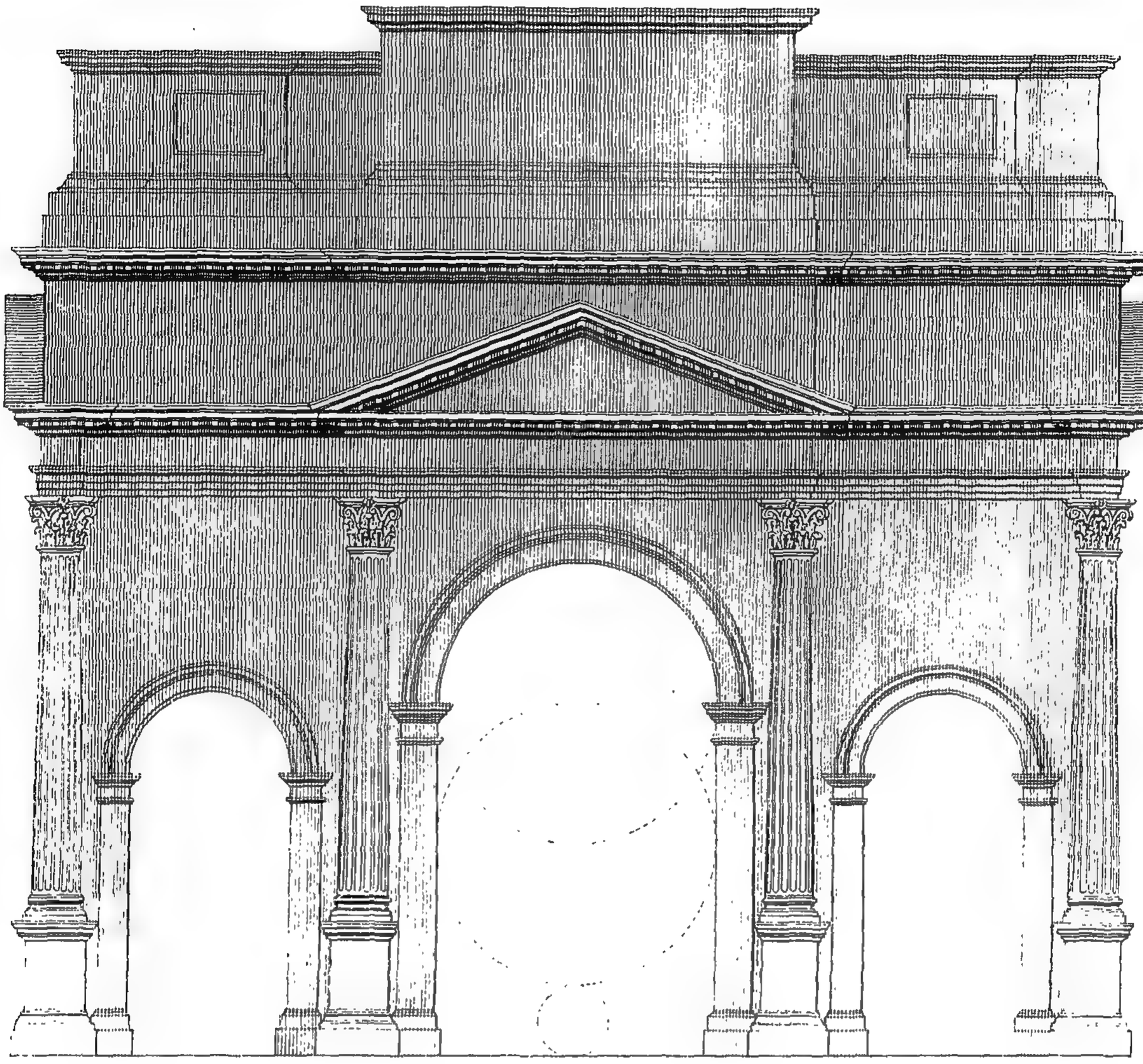
7 Mod.

S.R. delin: 1767.

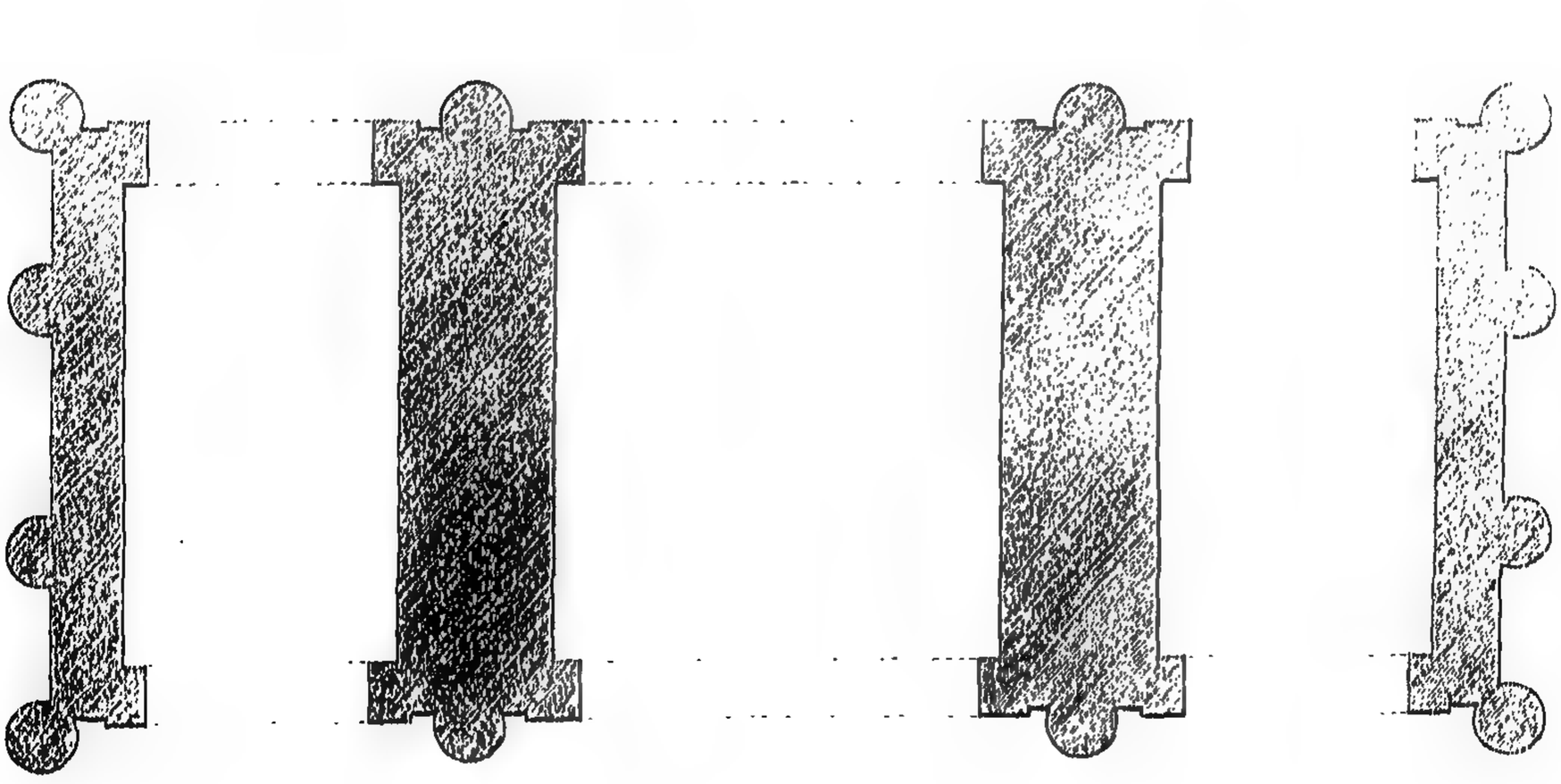
CORINTHIAN PORTAL

Part I Pl. XXV

Trivmphal Arch.

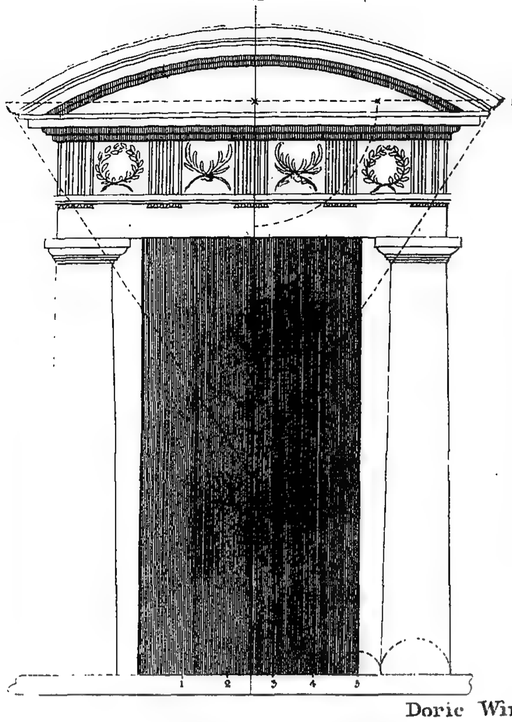




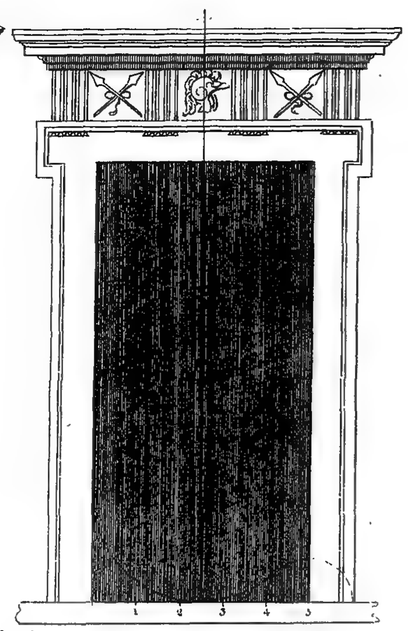


S. Ravenet 1767.

A

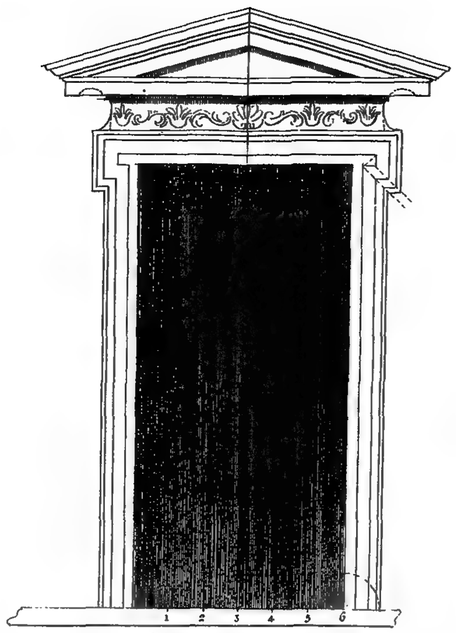


A



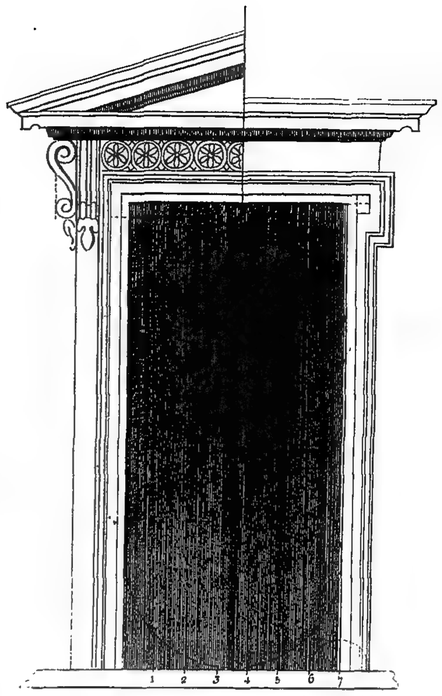
Doric Windows

B

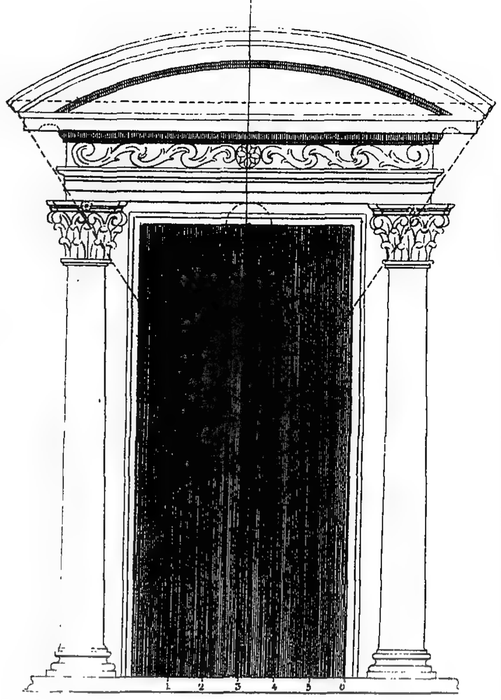


An Ionic Window

C



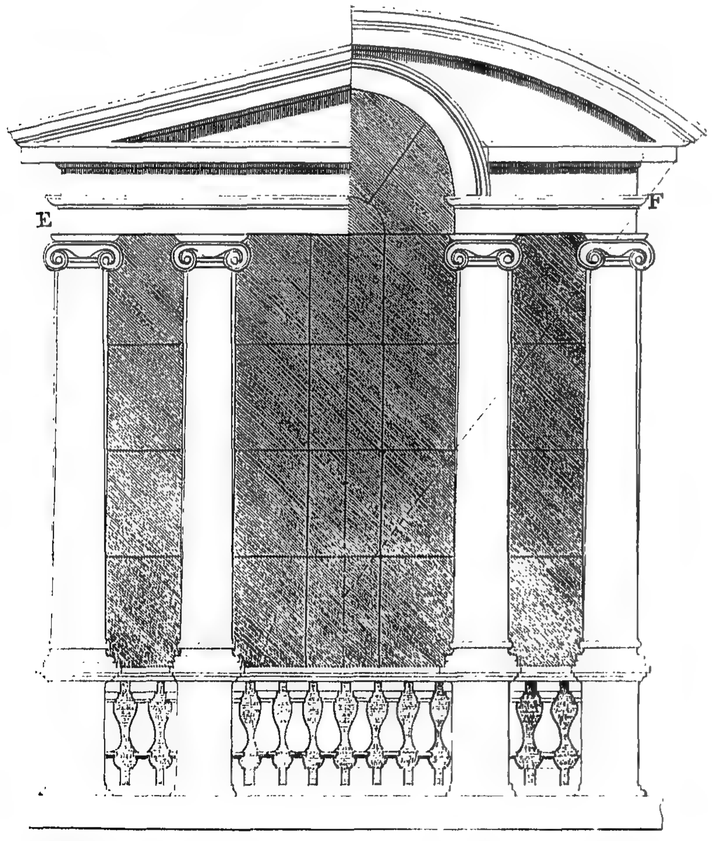
D



Corinthian Windows.

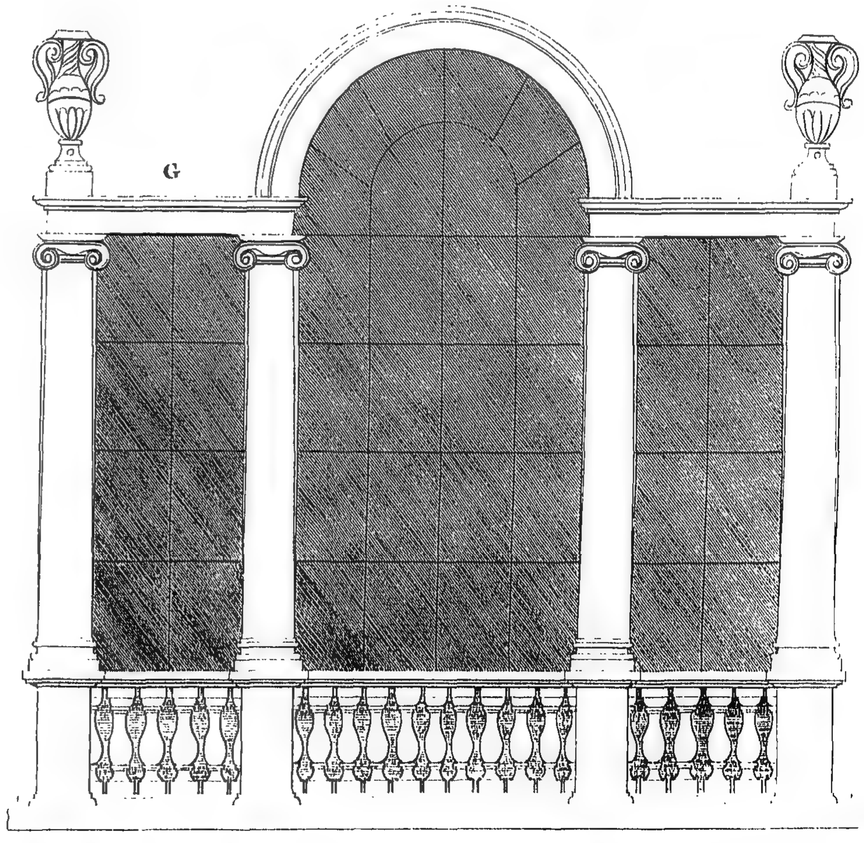
E

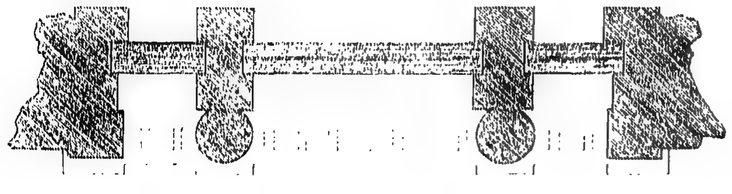
F

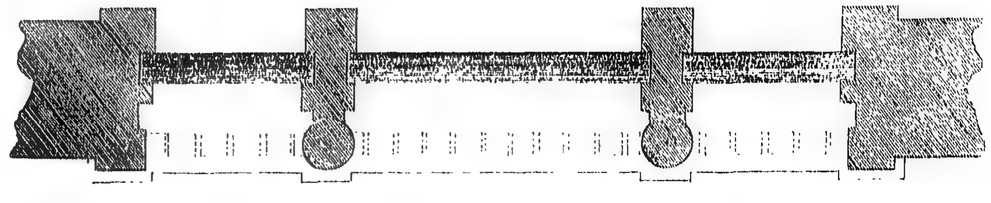


Ionic Venetian Windows.

G





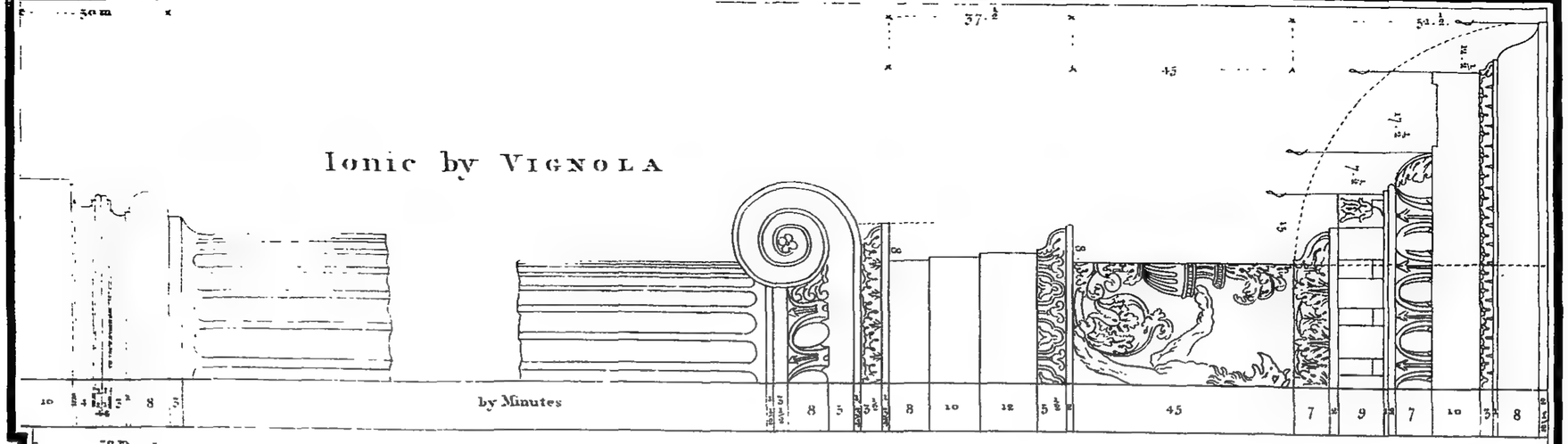


The Scale

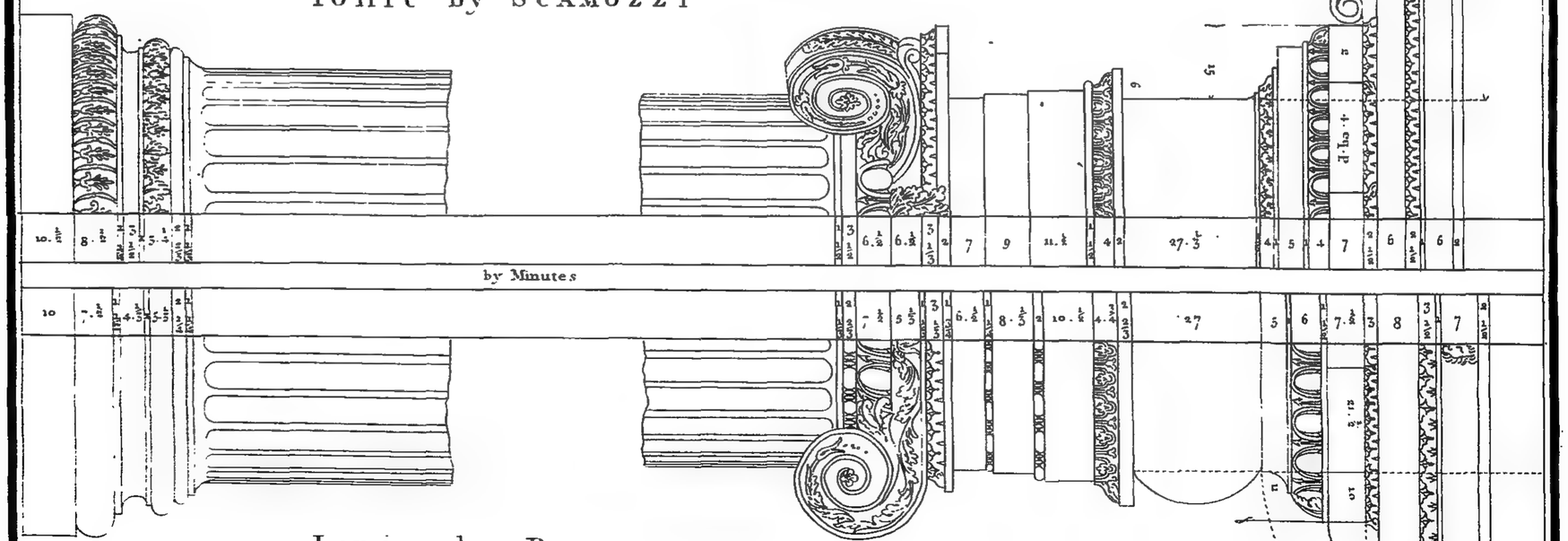
0 1 2 3 4 5 6 7 8 9 10 Feet.

S R delin 1787

Ionic by VIGNOLA



Ionic by SCAMOZZI



Ionic by PALLADIO

Doric by VIGNOLA

by Minutes

Doric by SCAMOZZI

by Minutes

Doric by PALLADIO

½ Mod.

50 m

Corinth^n by VIGNOLA

Corinthian by SCAMOZZI

Corinthian by PALLADIO

by minutes

Semi-Module

I. Mod: 1/8

Part I. Pl. XVIII.

REMARKS

CONCERNING

PUBLICK and PRIVATE EDIFICES,

WITH DESIGNS.

IGITUR cum in omnibus operibus ordines traderent, id maxime in Ædibus Deorum, in quibus operum laudes & culpæ æternæ ſolent permanere, VITR. Lib. III. c. 1.

Alter Gradus erit diſtributionis cum ad uſum patrum familiarum, ad pecuniæ copiam, aut ad elegantiæ dignitatem, ædificia aliter diſponentur. Namque aliter urbanus domos oportere conſtitui videtur, aliter quibus, ex poſſeſſionibus rufticis influunt fructus, non idem fœneratoribus: aliter beatis & delicatis: potentibus vero, quorum cogitationibus reſpub. gubernatur ad uſum collocabuntur: & omnino, faciendæ ſunt aptæ omnibus perſonibus ædificiorum diſtributiones. Lib. I. c. 2.



REMARKS,

CONCERNING

PUBLICK and PRIVATE EDIFICES.

CHAP. I.

General Hints concerning the modern Architecture of Europe. Brief Accounts of ſome eminent Britiſh Architects.

THE ſchools of Italy, wherein the ſtudy of architecture has been conſtantly encouraged and cultivated ever ſince it's revival from the veſtiges of antiquity, have propagated throughout the moſt civilized parts of Europe, the methods of adapting the orders to the deſigns of public and private edifices; however, as the great and eſſential beauties in this art, do not reſult from the parts of a deſign taken ſeparately, but from the effect and concurrence of them all, it is not ſurprizing that there are ſo few examples of handſome buildings. In moſt countries, the artiſts and their employers ſeem to have been ignorant of the general diſtribution, or perhaps entertaining a fond partiality for their own fanciful ornaments and licences, to do honour to the genius of their native ſoil, have raiſed their ſtructures upon plans and elevations which partly bear a national character, and by theſe means the orders of antiquity have been jumbled with their own uncouth modes: yet it muſt be pleaded that the accidents of the climates might at firſt render it ſomewhat difficult to reconcile the elegancies of architecture with the methods they had adopted in their barbarous fabrics. The engraver's art has furniſhed numberleſs prints of views of different places; and in theſe it may be remarked, as well as in the relations of travellers, that at this very day it is only in the principal cities of Europe, ſome at-

tempts have been made in their edifices, which may tend to eſtabliſh ſuch ſyſtems as are founded in the rules of the beſt Italian ſchools, which rules may undoubtedly be applied to the meaneſt ſtructures, often without any additional expence, or the leaſt impediment to their uſes.

But who will deny that even in Italy, we cannot obſerve a total negligence of the leſſer and uſeful diviſions of a plan for indiſpenſable domeſtick conveniencies? the principal intention of the maſters having been to ſtrike out greatneſs in their deſigns; and this was no ways blameable, being conſiſtent with the former reſerved and pompous cuſtoms of the inhabitants, much more addicted to parade than to hoſpitality. The French, on the contrary, ſtudious of whatever contributes to luxurious eaſe and gawdy appearances, have contrived to mangle the moſt ſimple plans and elevations to comply with the vanities of a capricious taſte, though it is very practicable to unite all their conveniencies with the chaſteſt manner of building. England, at different periods, has adopted the improprieties of both theſe nations, which are eaſily diſtinguiſhed at firſt ſight. Immenſe porticos, like thoſe of temples, with one great order of columns, cupolas and ſuch like miſapplied parts to a dwelling, a ſcarcity of windows in the ſame front, a range of common great rooms which have no ingreſs or egreſs, but through one another, are deſigns from the other ſide of the Alps: the other productions are as eaſily pointed out, by long ill proportioned windows, narrow interfeneſtrations, high pitched roofs, often equal to the height of the walls which ſupport them, loaded ſtill more with miſhapen turrets, monſtrous pediments for projecting windows in the roof, ſtair-caſes, which for the ſake of oſtentation, occupy too great a ſpace, and encroach upon the plans in the moſt eſſential parts; theſe and ſuch-like French imitations, carry us back to the reign of Charles II. for their reception into this iſland, and that ſoon after England had to boaſt of her Inigo with as much reaſon as Italy could of Palladio.

It is not to our purpoſe to ſpeak of the Gothic architecture, which was in the ſtate of its perfection in the reigns of Henry the ſixth and the ſeventh, but declined afterwards in the days of Henry the VIII, when HOLBEIN and JOHN of Padua, aimed at a reformation in the ſtiles of buildings, yet neither then nor in the ſucceeding reign of Elizabeth, did architecture make any conſiderable figure, although the names of the architects of thoſe times, LAWRENCE BRADSHAW, Sir RICHARD LEA, JOHN SHUTE, and ROBERT ADAMS are upon record as men deſervedly employed on account of their abilities; but we muſt paſs on to other perſons, of whom a more particular account may be expected, as their talents were employed with better ſucceſs.

The firſt we ſhall ſelect is,

Sir HENRY WOTTON,

Of an ancient family, was born in MDLXVIII. at Bocton, or Boughton Hall, in the pariſh of Boughton Malherbe, in the county of Kent. He ſtudied at Oxford, and was a fine ſcholar. On account of his abilities in politics, he was ſent ſeveral times abroad, chiefly into Italy, where he undoubtedly acquired his ſkill and taſte in architecture. Having paſſed an active life until the LV year of his age, he then was appointed to ſucceed to the provoſtſhip of Eton College; the next year he publiſhed his elements of architecture; though a ſmall book, it was ſo well thought of, that it was tranſlated into Latin by De Laet, and placed at the beginning of his edition of Vitruvius. Other writers have ſince raiſed their ſtructure upon fundamentals borrowed from this piece. The author was fully ſenſible of its merit, as appears by ſeveral of his letters; nevertheleſs, the tribute of public applauſe will ever remain his due. He died in the LXXII year of his age at Eton, and was buried in the college chapel.

INIGO JONES,

Was born about the year MDLXXII. in the neighbourhood of St. Paul's, London, of which city Mr. Ignatius Jones, his father, was a citizen and cloth-worker. Young Inigo diſtinguiſhed himſelf early by the extraordinary progreſs he made in the arts of drawing and deſigning, and was par-

particularly taken notice of for his ſkill in the practice of landſcape painting. His talents introduced him to the knowledge of William Earl of Pembroke, who took him into his patronage, and ſent him abroad with a handſome allowance. Thus ſupported, he ſpent many years in compleating his education, and preferring Venice for the chief place of reſidence, he ſuffered nothing of real value or merit to eſcape his induſtry. His reputation for architecture was ſpread all over Europe; in conſequence thereof, Chriſtian IV. King of Denmark, ſent for him, and appointed him his architect general: after enjoying that poſt ſome years, he obtained his diſmiſſion, and upon coming into England was appointed architect to the Queen. By the command of James I. in MDCXX, he took an accurate ſurvey of Stone Henge, and gave his opinion, with the account of that famous antiquity, which are publiſhed: he concludes at laſt, that it muſt have been originally a Roman temple, built probably between the time of Agricola's government, and the reign of Conſtantine the great. But whoever, as Mr. Walpole juſtly obſerves, has treated of this monument, has beſtowed on it whatever claſs of antiquitly he was peculiarly fond of; and there is not a heap of ſtones in theſe northern countries, from which nothing can be proved, but has been made to depoſe in favour of theſe fantaſtic hypotheſes; where was ſo much room for viſion, the Phœnicians could not avoid coming in for their ſhare. He made a ſecond tour to Italy, and continued there ſome years, improving himſelf ſtill further in his favorite art, till the place of ſurveyor general, of which the king had promiſed him the reverſion, fell to him; upon which he returned home, and ſat down to enrich his country with the fruits of his ſtudies. To the interval between the two voyages into Italy, M. Walpole is inclined to aſſign thoſe buildings of Inigo, which are leſs pure, and border too much upon that baſtard ſtyle, which is called *King James's Gothic*. Inigo's deſigns of that period are not Gothic, but have a littleneſs of parts, and a weight of ornaments, with which the revival of the Grecian taſte was encumbered, and which he ſhook off in his grander deſigns. Many are the edifices built by him, or after his deſigns, which will for ever celebrate the fame of his extraordinary genius as an architect, and none more ſo than that moſt ſtately and elegant pavilion the Banquetting Houſe at Whitehall, at firſt intended for the reception of foreign ambaſſadors, and is only a part of the great plan of a royal palace. Inigo's other buildings are, Lindſey houſe, Lincoln's Inn Fields. Shafteſbury houſe, Alderſgate Street. Barbers Hall, Monkwell Street. Covent Garden Arcades and Church. Part of the front of Somerſet houſe to the gardens and the water gate. The water gate at York ſtairs. Piſhiobury in Hertfordſhire. At Wooburn, a grotto chamber. Middle part of each end of the quadrangle at St. John's Oxford. Charlton houſe and Cobham Hall in Kent. The Queen's houſe at Greenwich. Ambreſbury, Wiltſhire. Gunnerſbury near Brentford. Coleſhill, Berkſhire. The Grange, Hampſhire.

He was well ſkilled in the mathematics, and had ſome inſight into the Greek and Latin languages, eſpecially the latter; and had a taſte for poetry. He was the moſt eminent architect of his time, and with juſtice is ſtiled the Britiſh Vitruvius. He wrote ſome curious notes in a printed copy of Palladio's architecture, ſtill preſerved in the library of Worceſter college at Oxford. He died in the LXXX year of his age, and was buried in St. Bennet's church near St. Paul's Wharf. His days were cloſed in ſorrow for the unfortunate end of Charles I. This prince knew the value of the fine arts to a ſtate, and had eſtabliſhed a royal academy, and appointed profeſſors for every branch, but their exiſtence finiſhed with him; the French availed themſelves of ſuch a ſcheme, which has been maintained ever ſince by an uninterrupted royal protection and bounty.

RALPH BATHURST,

Born in MDCXX, in the pariſh of Thedingworth, Northamptonſhire, was preferred to the Deanry of Wells; though no architect, his name ſhould be mentioned, becauſe by his endeavours and beneſactions, he contributed to introduce Grecian architecture into Oxford. The firſt effort of theſe elegancies was exhibited in the chapel of Trinity College, and afterwards in the court of the ſame College. It was reſerved for the taſte, the genius and the ſpirit of D. Bathurſt to work this reformation. He was a diſtinguiſhed wit, and a celebrated Latin poet, and died at the age of LXXXIV.

Sir

Sir CHRISTOPHER WREN,

The only ſon of Dr. Chriſtoper Wren, was born in MDCXXXII. at Eaſt Knoyle in Wiltſhire, of which place his father was then rector. In his earlieſt youth he attained great proficiency in learning, and ſoon ſhewed himſelf a moſt eminent mathematician. He was educated at Oxford. Towards the XXXI year of his age, having declined an offer from the King of going to Tangier in Africa, to direct the works of the harbour, and of the mole and fortifications of the town and citadel, on account of his tender conſtitution, he turned his thoughts chiefly to civil architecture, and was called upon to prepare deſigns for the general repair of St. Paul's Cathedral. In MDCLXV he took a journey to Paris to improve himſelf in the art, and unfortunately, (who will not judge with Mr. Walpole?) he went no farther; the great number of drawings he made there from their buildings, had but too viſible influence on ſome of his own: but it was ſo far lucky, that Lewis XIV. had erected palaces only, no churches; St. Paul's eſcaped, but the palaces at Winchester, Hampton Court, Marlbrough houſe in St. James's Park, and ſome others, were ſacrificed to the god of falſe taſte: this was the time that this idol was imported. For all this, the Monument, St. Stephen's Walbrook, and the Cathedral of London, are ſufficient proofs of this man's ſuperior abilities in works where ſuch could not be diſpenſed with. So many great architects as were employed on St. Peter's at Rome, have not left it, upon the whole, a more perfect edifice than this work (St. Paul's) of a ſingle mind, which was finiſhed in MDCCX. thirty-five years from its beginning, under one architect and one biſhop of London.

To the buildings already mentioned, muſt be added fifty parochial churches in London, the royal hoſpitals of Chelſea and Greenwich, the obſervatory in Greenwich park, the Theatre at Oxford, and ſome private houſes. Such a body of civil architecture as all theſe works compoſe, will rather appear the productions of a whole century, than of the care and induſtry of one man; of which no parallel inſtance can be given. A large collection of his drawings were purchaſed by All Souls College in Oxford; they fill ſeveral folio volumes, depoſited in the library of that college, adorned alſo with a curious buſt of ſo worthy a member. He died in MDCCXXII aged XCI years, and was buried in St. Paul's, London.

Sir JAMES THORNHILL,

Deſigned architecture.

Sir JOHN VANBRUGH,

Was born in the middle of the reign of Charles II. and deſcended from an ancient family in Cheſhire, which came originally from France, though he ſhould appear to be of Dutch extraction: he had a moſt ready wit, and was particularly turned for dramatic productions; he cultivated alſo his inclination for civil architecture. Many of his plans unite conveniency and greatneſs; his elevations are entirely abſurd, for by the exceſſive thickneſſes of the walls, they can only be compared to excavated quarries, and ſeem not raiſed artificially for the purpoſes of buildings; and as M. Walpole further adds, that a ſingle man ſhould have been capricious, ſhould have wanted taſte, is not extraordinary; that he ſhould have been ſelected to raiſe a palace, (Blenheim) built at the public expence for the Hero of his country, ſurpriſes one. Yet if Vanbrugh had borrowed from Vitruvius as happily as from Dancour, Inigo Jones would not be (according to M. Walpole,) the firſt architect of Britain. Sir John Vanbrugh died at Whitehall in MDCCXXVI. The buildings from his deſigns, are the duke of Newcaſtle's at Claremont. Caſtle Howard, Yorkſhire. M. Duncombe, Yorkſhire. Eaſtbury, Dorſetſhire. King's Weſton near Briſtol. Eaton Neſton, Northamptonſhire. One front of Grimſthorp, Lincolnſhire. Two little caſtles, Greenwich. His own houſe, Whitehall. The Opera-houſe, Hay-market.

WILLIAM

WILLIAM TALMAN,

Was eſteemed an ingenious architect; he built Chatſworth for the duke of Devonſhire. He was very aſſiduous and laborious in deſigning every thing in his travels worth his attention. His drawings were lately ſold in London by public auction, and it is ſaid, are depoſited in Eton College library. Further particulars of this gentleman are not come to public notice.

Sir WILLIAM WILSON,

Lived about the ſame time as the former, but little or nothing is come to our knowledge, but that he was an architect, who gave ſome deſigns for repairs and buildings at Warwick.

Mr. JAMES GIBBS,

Had a better opportunity than moſt artiſts, to diſplay his talents in the great ſtyle of architecture, being employed in building and repairing ſeveral principal churches in London; St. Martin's in the Fields. St. Giles. The new church in the Strand. St. Bartholomew's Hoſpital, and ſeveral houſes for perſons of diſtinction. But the taſte of this architect has thrown no new light upon the art.

The EARL of BURLINGTON,

Whoſe exalted rank in life was no obſtacle to his exerting the talents nature had given him. This nobleman was born in MDCXCV. and was intimately acquainted with the liberal arts, and a great encourager of them. His ſublime taſte and ſkill in architecture, will ever be juſtly admired; it is to them that Britain owes the extirpation of many abuſes till then currently received. He deſigned ſeveral plans and elevations; among others that are executed, are the aſſembly rooms at York, his own villa at Chiſwick, the weſt front of Marſhal Wade's houſe in Burlington Gardens, the dormitory at Weſtminſter ſchool; he repaired the portico of St. Paul's in Covent Garden, to honour the memory of his admired Inigo Jones, whoſe deſigns he was at the charge and trouble of publiſhing, in a manner that does credit to his nation, and worthy the elegance of his taſte.

WILLIAM KENT,

Lived in the houſe with the above nobleman; he was a painter, and deſigned architecture. The front of the Treaſury towards the parade, and the Horſe Guards at Whitehall, are from his deſigns---But what can be moſt recorded to his fame, is the taſte he ſhewed for laying out gardens. He was the firſt that waged war againſt all that monſtrous variety of clipped trees and borders, and by the overthrow of theſe hideous ſpectres, made way for the beauties of nature.

It muſt not be omitted to mention another nobleman, diſtinguiſhed likewiſe by his love and talents for this art. HENRY EARL of PEMBROKE, father to the preſent Earl, preſided at the board for building Weſtminſter bridge; he laid the middle ſtone of the foundation of the firſt pier in the afternoon of the XXIX day of January, MDCCXXXIX. and by his conſtant, prudent and reſolute behaviour towards the committee, obliged them to proceed with all the attention and diligence requiſite to ſuch an undertaking. It is from M. Walpole we collect, that this ſaid Earl has ſhewn by a bridge deſigned by himſelf, that had Jones never lived, Wilton might yet have been a villa worthy of antient Rome.

Nor ſhould be paſſed over in ſilence, the recent ſervices done to architecture by the great encouragement of many of the preſent nobility and gentlemen; moſt of whoſe travels into foreign parts have not been undertaken through a vague and idle curioſity, but from the laudable incitements of bringing home ſome uſeful intelligence in arts or politics. It is to the fortitude and munificence of M. DAWKINS and BOUVERIE, (the laſt died in Aſia Minor, univerſally regretted, and was buried in the chriſtian cœmetry at Smyrna, where I viſited his tomb) that we owe the deſcriptions of Palmyra and Balbec, ſo elegantly publiſhed by Mr. Wood, the companion

panion of their dangerous excurſions, from drawings taken upon the ſpot by Sig. BORRA. Many other names might be added, of ſkilful architects in Britain, who have given to the public undoubted proofs of the fruits of their ſtudies, whereby they not only have ſecured their own reputations, but have alſo contributed to the improved ſtate, architecture has lately attained in theſe iſlands.

CHAP. II.

Some General Reflections about the Embelliſhment of Towns and Cities. Of publick Edifices.

TOWNS and cities, however unſkilfully built, nevertheleſs may be capable of being greatly improved and embelliſhed; but we find that moſt places of the oldeſt, as well as of later date in theſe kingdoms, remain in that abominable negligence, confuſion and diſorder, wherein the ignorance and ruſticity of our anceſtors had at firſt planned them. New buildings are erected in different quarters, but no care is taken to alter the bad diſtribution of ſtreets, nor the miſhapen projecture of the fronts of houſes, built at all hazard, and according to each one's capricious fancy: the antient edifices remain juſt as they were at firſt raiſed, and make a heap of ill-formed buildings, huddled together, without ſyſtem, without œconomy, and without deſign. Mr. GWYNN, in his ingenious tract of London and Weſtminſter improved, has with great taſte and judgment ſtruck out many alterations for the advantage of the metropolis. Was it not ſeaſonable to revive this topic? when the very middle of London is the ſame as it was centuries ago. They who rebuilt after the calamitous fire, did not conſider of any improvements in the ſtreets and lanes; the ſame crooked windings and narrowneſs of ſtreets, have been preſerved, and while the capital, in its interior and moſt commodious quarters, has many ruinous places, the receptacles of filth and miſery, the ſkirts thereof are extending beyond all due limits, to the detriment of its own ſupport in many of the neceſſaries of life. It may literally be compared to a whitened ſepulchre, fair without, but within full of rottenneſs and dead mens bones; and although every alteration that might tend to remove entirely theſe nuiſances, could not take place but very ſlowly, yet by a proper attempt, it might be begun: it is ſaid, that in the Town Hall at Paris, there is hung up a map of the city, with ſuch improvements marked out upon it, as are judged neceſſary, which by degrees are brought about as opportunity offers.

The beauty and magnificence of a city depend principally upon theſe points. I. The entrances. II. The ſtreets. III. The buildings.

I. All the approaches to a city ſhould be thorough large avenues of ſome length, in direct right lines; it would be deſirable to have ſome avenues fall upon two or more principal ſtreets: the entrance of Rome by the Porta Del Popolo, is after this manner.

For the ſake of greater order and conveniency, the ſeveral entrances ſhould be placed nearly at equal diſtances round the circuit of a city. And how adviſeable it would be, to trace the line that ſhould ſurround a capital, as its boundary, beyond which no buildings ſhould be ſuffered within a limited diſtance? is a queſtion eaſily anſwered. That private property ſhould ſuffer a little for the public emolument, is ſometimes unavoidable, and though it ſhould not be diſpoſed of through wantonneſs, and without all requiſite compenſation, yet, when legally demanded or reſtrained, it ſhould be yielded; and tho' in all ſuch caſes the ſatisfaction given, amply indemnifies each individual, there always remain ſome complaints which are equally ſelfiſh and abſurd. According to M. Gwynn's plan, there is a great deal to pull down and rebuild; the moſt practicable might be begun firſt, and the reſt carried on at different periods of time, by ſucceeding generations, who will thankfully acknowledge the eſtabliſhment of ſuch an ædile reformation.

II. The

II. The ſtreets in a city require three conſiderations. I. That their number be ſufficient to prevent too much going round about, from one ſpot to another. II. That they be made wide enough to prevent all ſorts of ſtoppages, not only thoſe by carriages, but thoſe by the ſcaffoldings, &c. uſed in building or for repairs. III. That they be in a right line to ſhorten the way from one end to the other. According to Sir C. Wren, the breadth of the ſtreets in his improvement of London, were for

Lanes - - - - - -	XXX feet.
Leſſer ſtreets - - -	LX feet.
Greater ſtreets - - -	XC feet.

It is no trifling matter to deſign the plan of a large town, in ſuch a manner that the magnificence of the whole be ſubdivided into an infinity of beautiful particularities, all diverſified, ſo that we may ſeldom ever meet with the ſame objects. That there ſhould be order, and yet ſome apparent confuſion; that the buildings ſhould be in right lines, and yet, by proper breaks, avoid a diſguſting monotony: this leads on to conſider,

III. That the plans and elevations of all the buildings ſhould fulfil every intention of their deſigns. The heights of houſes ſhould be determined by the breadth of the ſtreet. In wide ſtreets, nothing is ſo contemptible as too low buildings, however otherwiſe they may be well deſigned. The height of buildings is alſo pleaded for town houſes, becauſe ground is ſo ſcarce and dear.

Since the fronts of houſes in a ſtreet, when they are too ſymmetrically diſpoſed, become very unaffecting, the uniformity ſhould only extend for the diſtance that is included between two croſs ſtreets, and for the oppoſite ſide. The art of varying deſigns depends upon a diverſity of forms given to buildings, upon dreſſing them with more or leſs ornaments, and the ſeveral manners of combining ornaments; with theſe three reſources, each of which may be ſaid to be inexhauſtible, one may in the greateſt city never twice repeat the ſame fronts. The palaces of princes, the town houſes of the nobility, of the gentry, and of the principal burgeſſes, and the dwellings of the inferior inhabitants, may have their ſeveral dimenſions and diſtributions, conveniently diſpoſed in the different quarters of a great and opulent city.

It would be needleſs to ſpecify every particular ſort of edifices, erected for public uſe; it is ſufficient to obſerve, that they ſhould bear all the marks of ſolidity, and not be void of that conveniency and beauty, ſuitable to their deſtined purpoſes —— Some are only temporary, while others are intended to endure for ages.

But among all the public edifices, they which hold the firſt rank are thoſe erected for public divine worſhip; built for duration; they are alſo the moſt ſuſceptible of all others of the ornaments of painting, ſculpture and architecture; we may ſee their effects in the Cathedral of St. Paul's. Public adoration and prayers performed with an awful ſolemnity, in places decently adorned for theſe duties, can never be deemed inconſiſtent with the trueſt piety, and the moſt ſpiritualized religion. Superſtition and idolatry will never prevail where the miſts of ignorance are diſpelled by the rays of ſacred truth, and the civil and religious liberties of the people are duly maintained.

If the moderns are left in the dark about the private habitations of the antients, the ſame cannot be ſaid of their temples: The ruins of theſe edifices, in different places, are more perfect than all others; and ſome of theſe might have given models for the ſtructure of the Chriſtian churches; indeed there were ſeveral that after the firm eſtabliſhment of our religion, were conſecrated; the Pantheon, the Temple of Fortuna Virilis, the Temple of Veſta at Rome, and others in and out of Italy. But it happened that the firſt Chriſtians rather choſe the baſilicas for the models of their churches, (nor are they improper for the ſame purpoſes) and the firſt was built at Rome, by Conſtantine the Great, in the Year CCCXXVI. upon the ſame ſpot where St. Peter's

St. Peter's now ſtands, and was dedicated to the ſame ſaint. But this plan was not taken from the ſimple Baſilicas, the breadth of the parallelogram was divided into three equal parts; the middle part was the nave, and each aiſle was again divided into two by a row of columns, ſo that there were four rows of columns, and theſe, with the ſide walls, formed five ſeparate walks up the church, from weſt to eaſt; the top of the parallelogram was croſſed by the tranſcept like the upper part of a T, with an hemi-cycle fronting to the nave, and of the ſame breadth; ſo that the plan of this church ſeems to have been the figure of an imperfect croſs. This figure was choſen by Conſtantine, in honour of his victory over Maxentius, and though imperfectly executed at firſt, was afterwards more perfectly traced in the ſucceeding ages: And here we may obſerve, that the cuſtom of placing churches eaſt and weſt, is a ſuperſtitious practice that does not deſerve to be followed, whenever ſuch a diſpoſition may occaſion greater inconveniency, as it has often happened; nor is the figure of the croſs the only one that ſhould take place in the deſign of a church.

In the time of Juſtinian, the church of St. Sophia, at preſent the Imperial Moſchea of Conſtantinople, was built, it ſurprized the barbarous world by its greatneſs, the boldneſs of its cupola, and the effect of its whole body; yet, in the details of its architecture, it is exceeding faulty. The Venetians wanting to rebuild the church to their patron ſaint, were the firſt who raiſed in Italy a cupola, and deſigned the plan in the more perfect form of a croſs, but nevertheleſs, St. Mark's, built in the XI century, has many of the defects of St. Sophia.

The church of St. Maria de Fiori, already begun at Florence, by Arnolphus Lapi, in the Gothic ſtyle, was finiſhed by Brunneleſchi, whom we have mentioned, as the firſt reſtorer of architecture from the antique; he contrived, in a new and ſolid manner, at little expence, the cupola. This was a great ornament at that time to the city of Florence, and was talked of as the wonder of Italy. Nicolas V. elected Pope in MCCCCXLVII. ſeeing the baſilic of St. Peter's begin to be threatened with ruin, meditated the project of rebuilding a new one, ſtill more vaſt than that of Conſtantine. The death of this pope put a ſtop to the work, though one end of the building was brought up five feet above the ground line.

The perfection that appeared in the cupola of Florence, ſupported upon the walls of the church, made the people of Rome imagine, that it was practicable to ſupport a cupola upon the arcades of the nave and of its tranſcept. The firſt that was executed was not important from its dimenſions: it was for the church of the Auguſtin Friars, near the Piazza-Navona at Rome. It was here that the bold ſcheme firſt took place of raiſing a cylindrical tower at ſome height; upon this the cupola was made to riſe, which before took its riſe juſt above the arches of the nave. This building was raiſed in MCCCCLXXXIII, about LX years after the cupola of St. Maria de Fiori had been entruſted to Brunneleſchi.

The building of St. Peter's at Rome was again reſolved upon, and Julius II. laid the foundation of that magnificent pile the XVIII day of April, MDVI. Bramante having carried it for his plan againſt a number of others in competition. But the foundations were placed with ſuch little care, the conſequence of too much precipitation, that having turned the arches intended to bear the walls of the cupola, they opened in many places ſoon after his death, which happened not long before the demiſe of the pope; this accident retarded greatly any advancement in the building. All immediate helps were ordered by Leo X. and the moſt ſkilful artiſts, Giocondo, Raphael and J. San Gallo, employed to remedy this evil, which was done effectually. At laſt Michael Angelo was called in, at the age of LXXII years, forty years after the building was begun, to preſide over the works; his diſintereſtedneſs was equal to his reputation as an artiſt, for he conſtantly refuſed the ſalary allotted to the architects of St. Peter's. To this great man is due the beſt decorations of this magnificent edifice; the portal that he had deſigned was far ſuperior to that which was executed; and he may be looked upon as the architect that contributed moſt to the perfection of St. Peter's in the ſeventeen years that he had the direction of the works. Fontana and Della Porta ſucceeded after him, and Maderno finiſhed this ſtupendous fabric.

The

The moſt conſiderable cupolas after St. Peter's, are thoſe of St. Paul's in London, and the church of the Invalids at Paris: but neither theſe nor many others, are ſupported from the ground in the manner that is moſt advantageous for the internal decoration. The arcades and piers uſed in the diviſions of the aiſles and naves, have a heavineſs which has met with very reaſonable objections; far leſs worthy of admiration, than thoſe bold and lofty Gothic arcades with narrow piers, which may juſtly claim the preference, by the more pleaſing ſenſations they produce upon the mind of the ſpectator: but the day is not loſt, the columns of the Grecians muſt triumph in the end, if diſpoſed with the ſame advantages as by the antients. Let us conſider their baſilicas and their temples, and we ſhall ſoon diſcover the true ſuperior uſes and beauties of inſulated columns, either in placing them to divide the nave and aiſles, or in ſupporting cupolas; who has ever entered into the little church of St. Stephen, Walbrook, without being charmed with its ſimple and beautiful periſtyle, and with the ingenious method of placing the cupola upon eight of the columns? On this occaſion we cannot forbear mentioning to the honour of M. Le Roy, his very ingenious *Hiſtory of the diſpoſition* and *different forms* of *Chriſtian Temples from the time of Conſtantine*; therein he has pleaded the cauſe of periſtyles ſo effectually, and has expatiated ſo forcibly upon their beauties, that they cannot fail of being preferred in all deſigns which will admit of ſuch uſeful and ornamental parts in their compoſitions.

CHAP. III.

Practical Conſiderations. Diſtributions of Plans. Explanation of ten Deſigns.

WHOEVER intends to build, ſhould previouſly be informed by the deſigns of the artiſt of the plan, it's elevations and ſections: and whenever the building is conſiderable, it ſhould be recommended to have the model of it in wood or paſte-board; at the ſame time the eſtimate of the expences ſhould be conſidered, that no impediment may happen on their account.

The drawings intended for the uſe of workmen, muſt be correctly made out, and for fear of miſtakes, the heights and breadths, &c. are all to be ſet down exactly in figures.

The ſeveral materials uſed for a building, ſhould be collected together in time, at the intended place, and in ſuch quantities as to occaſion no delays; for if the walls are not carried up equally in all their parts, there may be danger of ſome of them ſettling, notwithſtanding all the care of the moſt expert and diligent workmen.

It is always neceſſary to examine attentively, the qualities of materials, in order to inſure both ſtrength and beauty in the workmanſhip.

An Edifice is compoſed of three principal parts.

I. The foundation, which bears up the whole maſs or pile. II. The walls that encloſe it, and thoſe which divide it. III. The roof that covers it. Every part of the foundation muſt be ſolid, and in proportion to the maſs to be laid thereon. As different ſoils require different methods of ſecuring the foundation, no particular rule can be preſcribed, but upon the ſpot. However, in general, it may be ſaid, that there is no truſting to old foundations for a new ſtructure, that where the quality of the earth is of different ſtrata in the ſpot intended for a building, as loam and ſand, the ground muſt be dug by ſteps, in order to find the ſame bottom throughout the whole extent of the foundation, or it muſt be planked.——Some ſwampy grounds require planks and piles: all theſe things the ſagacity of the architect is beſt able to determine from the circumſtances themſelves.——We ſhall only obſerve, that depth of foundations is leſs neceſſary than

breadth, for the ſecurity of the incumbent walls, becauſe breadth gives them a ſole or patten, whereby they are preſerved from falling by any inclination out of their centers of gravity.

The thickneſs of walls is to be determined by their uſes and heights, and theſe, as we have ſhewn occaſionally, by the orders. The thickneſs of the walls of a houſe, muſt be diminiſhed at every ſtory, becauſe the foundations ſhould not be loaded with an unneceſſary weight. The beſt method to diminiſh walls, is, that the middle of the thinneſt part be over the middle of the thickeſt; but if one ſide of a wall muſt be perpendicular, let it be the inner, on account of floors and croſs walls, then the diminiſhed part without is covered with a plinth or cornice; this will be both ornament and ſtrength.

This leads us to ſpeak a word of falſe bearing, one of the greateſt, real and apparent faults in a ſtructure; a falſe bearing may be ſaid of any part that is not ſuſtained directly from the ground; ſo that *ſolid may always reſt upon ſolid*; any columns, pilaſters or piers that bear upon the crown of an arch, or upon the projectures of platbands or truſſes in the air, are ſo many falſe bearings. Gothic edifices abound with theſe abuſes; the old houſes which project at every ſtory into the ſtreet, to gain in the air what would have not been allowed on the ground, are abſurdities againſt the firſt mechanical principles of building, which require that the baſe of every ſtructure ſhould be broader than the ſummit.

Windows are apertures left in the walls of an edifice, to admit a neceſſary quantity of light and air into the interior parts. For this reaſon, windows in large apartments are made twice as high as they are broad; they admit of more light than ſquare ones, and the proportion becomes more beautiful, being as 1 : 2. The wall between two windows is called the pier, or interfeneſtration: when windows require to be made very large, as for a ſtair-caſe, gallery, a chapel or church, &c. it is requiſite to make their upper parts circular, becauſe an architrave drawn in a right line would not be ſtrong enough to ſupport the weight. Indeed over all windows, occult arches behind the external courſe of materials, ſhould be turned to diſcharge the weight from above; without this caution there would be great riſk of the lintels and architraves breaking.

The upper windows in any edifice muſt be placed directly over the under ones, this is not only indiſpenſable by the laws of ſolidity, which require that ſolid ſhould reſt upon ſolid, but alſo by the rules of ſymmetry, which require the ſame diſtribution in the upper and lower parts.

The above conſiderations for the height and breadth of windows, are hinted to avoid that diſagreeable obſcurity which reigned in the apartments of moſt of the antient barbarous buildings: the advantages they claim, which are not to be neglected, are, that they excluded cold in the winter, and heat in the ſummer; but ſuch lodgings have all the appearance of caves, and make it neceſſary at noon day to bring in the light of lamps or candles, ſince they were conſtructed impervious to that of the ſun.

The contrary miſtake to this extreme, are thoſe lanthorn houſes, which among other modes of falſe taſte were introduced from a neighbouring nation; in theſe there reigns ſuch a glare of light as is prejudicial not only to the eyes, but to every object within the room.

The inconveniencies of too large windows, or what is the ſame, of too many windows in a certain ſpace, are carefully to be avoided; the winter's cold, and ſummer's heat, penetrate into the apartments, notwithſtanding every contrivance to exclude them: now a dwelling is intended to ſecure us againſt the injuries of the weather, and to receive light; therefore the ſize and number of the apertures for windows, muſt be proportioned to the places they are intended to enlighten; all theſe ſeveral places bearing a certain analogy to the whole edifice, the windows in them ſhould alſo have their apertures proportioned to the whole.

The interior architraves of the windows ſhould be ſufficiently below the cieling to allow for a cornice to the room.

The

The lower part of the window ſhould be about three feet from the floor, and there ſhould be no internal thickneſs of the wall, to prevent any one from ſtanding up cloſe to the ſaſh.

If a chamber is twelve feet high in the clear, from floor to cieling, the cornice may be allowed twelve inches or more, and taking three feet from the bottom of the window to the floor, there remains then eight feet for the height of the window, half of which is given for its breadth.

A range of windows ſhould never have the intervening pier between two windows leſs in breadth, than the breadth of the aperture of one window, nor more than twice that breadth; the angular pier of a building ſhould be allowed ſomething more than the breadth of the pier between two windows.

All windows leſs in height than two ſquares, or at leaſt than the diagonal of one of them, ſhould not appear in the front of a houſe, where the ſmalleſt degree of magnificence is intended.

A door is an aperture left in the wall for the conveniency of entering into the building, or from one apartment or diviſion thereof into another, when there are two or more.

A door muſt not be leſs than ſix feet high, and three feet broad; this is determined by the height and breadth of a man, for whoſe conveniency it is made. But the height and breadth is increaſed or diminiſhed as other uſes and proportions may require.

The door of a principal front, ſhould always be placed in the middle of that front, with an equal number of equidiſtant windows on each ſide. From this it follows, that the number of apertures in a grand front is always unequal.

It often happens, that in houſes having from three to five windows, or an equal number in front, the door is not placed in the center, and this is inſiſted on, to give up the ſymmetry of the front for the conveniencies of the interior diſtribution; whenever this is allowed, the dreſſings of the door ſhould not be richer nor different from that of the windows; for it would be the higheſt abſurdity to ſignalize this irregularity by any particular marks; if one ſide of ſuch a building is to a ſtreet, the door would be beſt placed on that ſide.

When ſeveral doors are required in the ſame front, (this ſuppoſes it of vaſt extent) the principal door muſt be placed in the center, and ſhould be more ornamented than the reſt; the other doors ſhould be at equal diſtances from the middle.

The moſt eligible figure for chambers, is a rectangular quadrangle, becauſe the neceſſary furniture, ſuch as chairs, tables, looking-glaſſes, ſophas, beds, &c. can be better placed in ſuch a figure than any other; ſometimes an oval, or circular, or octogon plan, &c. is allowed to ſome particular room, as it introduces a variety.

The proportion of the breadth to the length of rooms, is 1 : 1 or 2 : 3 or 1 : 2. Of galleries, 1 : 3.

The height from floor to cieling of rooms, ſhould neither be too great or too little, and ſhould have a relative proportion with their breadth and length. When chambers are too large, and their cielings very high, they cannot be warmed in cold weather but with much trouble and expence. If on the contrary they are too ſmall, with low cielings, they are very prejudicial to the health of thoſe who frequent them, becauſe the volume of air in ſo confined a ſpace is ſoon tainted; without theſe two conſiderations let us obſerve, that the beauty of a room requires, that its height ſhould have the relative proportion with its breadth and length. This height is variouſly determined. Either divide the breadth into three, and take two; or into ſeven equal parts, and take five; or into four, and take three for the ſeveral heights.

If

If a room is to be vaulted, take the heights as follow; divide the breadth into ſix equal parts, take five; or into eight, and take ſeven; or into twelve, and take eleven.

Chambers ſhould communicate one with the other. Doors are the means of this communication: we are not of the opinion of thoſe who allow but one door to a room, the idea is confined, and doors may be made to ſhut cloſe.

A bed room ſhould communicate with a dreſſing room, this with an anti-room; a drawing room with a dining room, &c. &c. but the ſecret paſſages may be preſerved.

The uſe of one chamber ſhould not obſtruct or prejudice the uſe of another. Thus a kitchen next to a parlour or drawing room, would be intolerable: nor ſhould a ſtudy be placed near the childrens apartments, becauſe the noiſes and cries of theſe lively little folks, would be very troubleſome to any perſon retired to read and meditate.

The diſtribution therefore of each chamber, ſhould be made in ſuch a manner as to afford, by it's ſituation, every ſuitable conveniency, with as few obſtructions as poſſible; for example, if the back front of the houſe is to the eaſt, and the fore front in a publick ſtreet or ſquare, where there is a conſtant noiſe and buſtle, then it is better to have the ſtudy and drawing room backwards, becauſe the noiſe of the ſtreet is equally offenſive to the ſtudious, as to the converſation of a ſelect ſociety.

Groined arches uſed for cielings of baſement and under-ground rooms, are deſcribed by the interſection of the ſegments of a circle, or of an ellipſis.

Sometimes a place is vaulted in with ſemi-circular arches, or leſſer ſegments.

A ſpherical vault is a hemiſphere, or leſs.

Every ſort of arch ſhould be ſupported upon walls and piers, capable to bear its weight and thruſt.

In carrying up a building, the proper piers are made for the intended arches, but theſe are not turned, till the upper floor and the roof are laid, leſt the fall of any materials might happen to damage the arches.

The flatter the arches are, the greater the thruſt, therefore they require ſtronger piers and thicker walls.

The ſtairs are a number of ſteps one above another, and ſerve for the aſcent and deſcent to and from one floor to another; the place ſet apart for the ſtairs, is called the ſtair-caſe; ſtairs are either ſtrait, or flyers, or winders, or mixt.

All ſtairs ſhould have ſufficient light, and be as eaſy of aſcent as poſſible. In ſmall buildings one ſtair-caſe is ſufficient, and goes quite from the bottom to the top.

In greater buildings, two ſtair-caſes, and ſometimes three, and more, are neceſſary, but then the principal ſtairs only aſcend to the principal floor.

Stairs ſhould be deſcribed and accounted for exactly at the very time that the plan of a building is delineated; for want of which, oftentimes unpardonable errors have been committed, ſuch as having a little blind ſtair-caſe to a large houſe, and a large ſpacious ſtair-caſe to a ſmall houſe, or not a ſufficient number of ſtair-caſes to the extent of the building, or not room ſufficient to riſe to the intended height.

The

The narrower ſteps require the higher riſe, becauſe the breadth of a ſtep added to double the riſe, muſt be equal to two feet, the common extent of a man's ſtep upon plain ground. The riſe of each ſtep muſt not be leſs than five inches, nor more than ſeven, that one may go up and down without fatigue; and the tread or breadth of each ſtep muſt not be leſs than ten inches, nor more than fourteen: the length of the ſtep may be any thing above three feet, as the place will allow, though ten or twelve feet is ſufficient even for a palace.

After every nine, eleven, or thirteen ſteps, there ſhould be a quarter pace, for the greater eaſe and conveniency in aſcending and deſcending. The number of ſteps are made unequal, that you may finiſh with the ſame foot with which you began.

Winding ſtairs are deſcribed round, a circle, an oval, a ſquare, or an equilateral tri[illegible] for each of theſe, ſome wind round a ſolid newel, and others round a hollow newel. It [illegible] obſerved, that the middle of every oblique ſtep has its tread equal to that of the other ſquare ſ.

A chimney is an opening in the wall of a room; its uſe is for the placing the fire intended [illegible] warm that chamber. It conſiſts of the hearth, the jambs, the mantle and the fu[illegible]l. It is by the good conſtruction of all theſe parts of a chimney, that the heat of the fire is given to the greateſt advantage, and without the leaſt diſpoſition to fill the chamber with ſmoak.

The breadth and height of the fire-place, ſhould be proportioned to the ſize of the room; the funnels of the different floors all go up in the thickneſs of the wall and unite in one ſtack; the ſtack ſhould be carried a ſufficient height above the ridge of the roof, that the ſmoak may aſcend freely in the air. The tops of the funnels ſhould not be left with too wide apertures, that the ſmoak be not driven back, neither with too ſmall vents, becauſe they being ſoon choaked up, would produce the ſame bad effects. A grate placed too low, the ſituation of the doors in a room, and many other things, are often the cauſe of the ſmoak not aſcending; but whatever may occaſion it, if once diſcovered, the evil may be remedied.

The roof of a houſe is that part, which, after the perpendicular walls are carried up to their preſcribed height, covers in the whole ſuperior plan, and ſecures it againſt the injuries of weather. The inner, as well as the outward walls, ſhould bear their ſhare of its preſſure. It ſhould neither be too light or too heavy.

The moſt common roofs are compoſed of timber ſcantlings, which are covered with different materials, as plain or pan-tiles, flat-ſtones, ſlate, lead, copper, &c. each kind requires a different pitch or ſlope for the rafters, ſufficiently known to every ſkilful carpenter. Sheet lead uſed for roofs is very weighty, liable to crack, and is expenſive in keeping in repair: pieces of copper uſed as ſlates, about two feet ſquare, are to be preferred: ſlate is a light covering that does keep itſelf up without frequent repairs: tiles are of more general uſe; to be good, they ſhould be well burnt, well moulded, and when ſtricken ſhould yield a clear ſound.

The roof of a houſe, ſhould neither be of too high or too low a pitch; for a high pitched roof is of an aukward appearance, is an uſeleſs load upon the walls of any edifice, expoſes it more, eſpecially in great towns and cities, to the danger of taking fire, on account of the greater quantity of timber uſed. If a roof is flat or too low pitched, the ſnow and rain lodges upon it and drains off but ſlowly, ſo that it occaſions the timber to rot, requires frequent repairs; all this ruins the cielings, floors, &c. it is intended to cover and preſerve. The M. roof does honour to its inventor. The manſard or broken roof has in it's upper part the diſadvantages of the flat roof, and it's ſides have all the diſagreeable appearance of a high pitched roof.

Nothing is ſo eaſy as to make convenient apartments in a building; but nothing is more difficult than to make this diſtribution of plans with ſymmetry in the elevations. For ſymmetry almoſt always occaſions much trouble in determining the meaſures and the ſituations of each part,

agreeably to it's conveniency and uſe, oftentimes the ſymmetry of one part is an unſurmountable obſtacle to the ſymmetry of another, e. g. when a partition wall falls upon the aperture of a door or a window. In this caſe, a ſham door, or a ſham window, or a double cieling muſt take place, rather than tranſgreſs the ſymmetry of the correſpondent parts.

It is impoſſible to give any poſitive rules about the diſtribution of plans, the ſituation of the edifice, it's greater or leſſer extent, the regularity or irregularity of the ground, the uſe it is intended for by the perſon for whom it is built, the expences aſſigned, are all ſo many different cauſes which will allow of great variety in the diſtribution of plans, and the rules for theſe purpoſes are almoſt numberleſs. We muſt then limit ourſelves within ſome general obſervations upon the arrangement of the rooms, and remark any advantages they may have from certain convenient paſſages to and from them; for want of this requiſite attention, irreparable faults are committed.

The perſon who intends to build, moſt commonly forms the firſt idea of a plan for his own uſe, and conſiders the particular conveniencies that he may require; and having fixed the ſum intended to be diſburſed, he leaves to the ſkill and experience of the architect, to delineate a plan for the execution of thoſe ideas, in ſuch a manner that the irregularity of the ſpot, nor any other difficulty that might ariſe therefrom, do not prevent him from compoſing a convenient and acceptable deſign.

The general diſpoſition of the plan, is the only thing that demands the very firſt attention. A building to be well placed, muſt have an advantageous entrance, muſt preſent itſelf well, muſt be in a good expoſure, and diſtant from all nuiſance. Firſt then, a houſe of any degree of magnificence in town, ſhould be ſituated to have a court-yard before it, and garden behind; though if the ſituation is in a grand ſquare, or that it enfilades a fine ſtreet, or ſome ſuch like conſideration, then the principal part of the building may be upon the ſtreet; and the inferior parts, in the wings or backwards.

The ſecond general obſervation is, to place the offices and ſtables, ſo as not to be offenſive to the apartments. There are three ways of doing this, according as the ſpot of ground will permit. The firſt is to place them in the wing, when the front of the ground is not too narrow. The windows of the kitchen ſhould look towards the north, that it may be at all hours of the day cool and ſhaded.

On the contrary, the ſtables ſhould be opened to the ſouth, to dry up the moiſture; the coach-houſes to the weſt, that the ſun may not damage the varniſh or paintings of the coaches. The beſt ſituation of the kitchen and ſtables, is at the extremity of the wings, and to the ſtreet, that the litter and ſweepings may be carried off without entering into the principal court-yard, and that the forage and other articles may be delivered in from the ſtreet.

The ſecond way to prevent any nuiſance is, when the area of the ground will allow it, to have one or more yards, beſides the principal court; within theſe yards, which are never ſeen in the avenue to the houſe, are placed the kitchen, and other offices, the ſtables, coach-houſes, pumps or wells, and watering troughs, &c. in theſe yards alſo the coaches are waſhed, the horſes curried, carts are unloaded of the wood, coals, hay, corn, &c. and whatever is brought for the ſervice of the houſe and ſtables; ſo that by theſe means, the principal court-yard or avenue, is never dirtied or embaraſſed on theſe occaſions, and the main body of the dwelling is not troubled with the noiſe of all theſe tranſactions, by the proper diſtance and ſeparation from them. Laſtly, when there is place ſufficient for two yards, beſides the principal avenue, in the one is the ſervants hall, with the kitchens, and other offices: In the other, are the ſtables, coach-houſes, bog-houſes, granaries and lodgings for the ſervants.

This is at preſent the moſt approved diſpoſition of theſe parts of a building, it being more eligible that the ſervants ſhould have further to bring the things under covers, from the kitchen and offices,

offices, than to have theſe places in vaults under the main body of the houſe, whence ariſe many inconveniences, viz. their being ill lighted, and not airy, but cloſe and damp, is attended with many diſagreeable and offenſive circumſtances, as the noiſe of ſervants, the ſmell of victuals, and the blackneſs of the ſmoak, diffuſed into the beſt apartments, to the great damage of the decorations and furniture.

When the kitchens are at a great diſtance, it is attended with difficulty in ſerving up the diſhes hot and in order; a greater number of ſervants are then neceſſary; there might be an outward room, or ſome place to heat and place things again in their proper order, before they are ſerved up at table, eſpecially in cold and rainy weather.——But a covered paſſage will prevent this trouble, and if it cannot be made above, it may be contrived to paſs under ground.

Having fixed the ſituation and general diſpoſition of a building, one ſhould examine if the ground is extenſive enough to admit upon one floor, all the rooms and neceſſary conveniencies required; this without doubt would be the moſt convenient, as well as the moſt elegant choice; but not being adopted, we muſt come to a diſtribution of the upper floors; but it ſhould be alledged, that not more than one ſtory upon a baſement, ſhould be given to a houſe of the firſt elegance; the rooms will be loftier and more healthy.

It may be imagined, that when ſeveral floors are made one above another, it ſaves expence, as they are all covered with the ſame extent of roof; however, it happens quite the contrary; for although the foundations and the roof are more extenſive, the lower the building is with the ſame number of rooms, yet the height and thickneſs of walls, and depth of foundation are reduced; then likwiſe, floors, cielings and ſtairs, are retrenched, which ſave much expence, not to mention the ſtacks of chimnies, and many other articles that would be tedious to enumerate; and it is matter of wonder that buildings of one ſtory only, eſpecially where the ground plot will allow it, are not more in vogue.

To guard againſt the dampneſs of ground floors, they ſhould be raiſed ſeveral ſteps above the level of the ground, and vaulted underneath, or at leaſt, which is leſs expenſive, the joiſts of the floors muſt be laid upon ranges of dry brick; but this guards not ſo effectually againſt the moiſture that ariſes from the ground, as the vaults. And here be it obſerved for the health of the publick, that even the meaneſt dwellings ſhould never be ſuffered to have their ground floors level with the earth, but raiſed a foot or two higher, eſpecially in the country where lives are ſo much the more precious to the community, as their labour continually ſerves to provide the food and raiment of thoſe who live in caſe and plenty.

It remains now to explain the order of the rooms, in one apartment, the uſe of each in particular, and the paſſages leading to and from them, that they may be found with every requiſite convenience; and we may attend to the inſtructions which the French authors have delivered upon this ſubject, becauſe they, above all others, have ſtudied to contrive the moſt commodious diviſions of plans.

A grand apartment ſhould conſiſt at leaſt, of a hall, or veſtible, or lobby, of a firſt and ſecond anti-room, of a parlour, a ſaloon, a bed chamber, ſeveral light cloſets, wardrobes, &c. all adapted to the rank of the owner and his viſitors.

The veſtible leads to the great ſtairs, and communicates with the firſt anti-rooms; theſe are the places for the ſervants in waiting. The ſecond anti-rooms, are deſigned to receive perſons who deſerve better notice; they are uſed likewiſe for eating-rooms, and therefore ſhould be choſen on that ſide of the houſe neareſt to the kitchen.

The ſaloon, or room for company, opens generally into the ſecond anti-rooms: on ſome particular occaſions it is uſed as a ball or muſick room, or card room, being, after the gallery, the moſt diſtinguiſhed for ſize.

If

agreeably to it's conveniency and uſe, oftentimes the ſymmetry of one part is an unſurmountable obſtacle to the ſymmetry of another, e. g. when a partition wall falls upon the aperture of a door or a window. In this caſe, a ſham door, or a ſham window, or a double cieling muſt take place, rather than tranſgreſs the ſymmetry of the correſpondent parts.

It is impoſſible to give any poſitive rules about the diſtribution of plans, the ſituation of the edifice, it's greater or leſſer extent, the regularity or irregularity of the ground, the uſe it is intended for by the perſon for whom it is built, the expences aſſigned, are all ſo many different cauſes which will allow of great variety in the diſtribution of plans, and the rules for theſe purpoſes are almoſt numberleſs. We muſt then limit ourſelves within ſome general obſervations upon the arrangement of the rooms, and remark any advantages they may have from certain convenient paſſages to and from them; for want of this requiſite attention, irreparable faults are committed.

The perſon who intends to build, moſt commonly forms the firſt idea of a plan for his own uſe, and conſiders the particular conveniencies that he may require; and having fixed the ſum intended to be diſburſed, he leaves to the ſkill and experience of the architect, to delineate a plan for the execution of thoſe ideas, in ſuch a manner that the irregularity of the ſpot, nor any other difficulty that might ariſe therefrom, do not prevent him from compoſing a convenient and acceptable deſign.

The general diſpoſition of the plan, is the only thing that demands the very firſt attention. A building to be well placed, muſt have an advantageous entrance, muſt preſent itſelf well, muſt be in a good expoſure, and diſtant from all nuiſance. Firſt then, a houſe of any degree of magnificence in town, ſhould be ſituated to have a court-yard before it, and garden behind; though if the ſituation is in a grand ſquare, or that it enfilades a fine ſtreet, or ſome ſuch like conſideration, then the principal part of the building may be upon the ſtreet; and the inferior parts, in the wings or backwards.

The ſecond general obſervation is, to place the offices and ſtables, ſo as not to be offenſive to the apartments. There are three ways of doing this, according as the ſpot of ground will permit. The firſt is to place them in the wing, when the front of the ground is not too narrow. The windows of the kitchen ſhould look towards the north, that it may be at all hours of the day cool and ſhaded.

On the contrary, the ſtables ſhould be opened to the ſouth, to dry up the moiſture; the coach-houſes to the weſt, that the ſun may not damage the varniſh or paintings of the coaches. The beſt ſituation of the kitchen and ſtables, is at the extremity of the wings, and to the ſtreet, that the litter and ſweepings may be carried off without entering into the principal court-yard, and that the forage and other articles may be delivered in from the ſtreet.

The ſecond way to prevent any nuiſance is, when the area of the ground will allow it, to have one or more yards, beſides the principal court; within theſe yards, which are never ſeen in the avenue to the houſe, are placed the kitchen, and other offices, the ſtables, coach-houſes, pumps or wells, and watering troughs, &c. in theſe yards alſo the coaches are waſhed, the horſes curried, carts are unloaded of the wood, coals, hay, corn, &c. and whatever is brought for the ſervice of the houſe and ſtables; ſo that by theſe means, the principal court-yard or avenue, is never dirtied or embaraſſed on theſe occaſions, and the main body of the dwelling is not troubled with the noiſe of all theſe tranſactions, by the proper diſtance and ſeparation from them. Laſtly, when there is place ſufficient for two yards, beſides the principal avenue, in the one is the ſervants hall, with the kitchens, and other offices: In the other, are the ſtables, coach-houſes, bog-houſes, granaries and lodgings for the ſervants.

This is at preſent the moſt approved diſpoſition of theſe parts of a building, it being more eligible that the ſervants ſhould have further to bring the things under covers, from the kitchen and offices,

offices, than to have theſe places in vaults under the main body of the houſe, whence ariſe many inconveniences, viz. their being ill lighted, and not airy, but cloſe and damp, is attended with many diſagreeable and offenſive circumſtances, as the noiſe of ſervants, the ſmell of victuals, and the blackneſs of the ſmoak, diffuſed into the beſt apartments, to the great damage of the decorations and furniture.

When the kitchens are at a great diſtance, it is attended with difficulty in ſerving up the diſhes hot and in order; a greater number of ſervants are then neceſſary; there might be an outward room, or ſome place to heat and place things again in their proper order, before they are ſerved up at table, eſpecially in cold and rainy weather.——But a covered paſſage will prevent this trouble, and if it cannot be made above, it may be contrived to paſs under ground.

Having fixed the ſituation and general diſpoſition of a building, one ſhould examine if the ground is extenſive enough to admit upon one floor, all the rooms and neceſſary conveniencies required; this without doubt would be the moſt convenient, as well as the moſt elegant choice; but not being adopted, we muſt come to a diſtribution of the upper floors; but it ſhould be alledged, that not more than one ſtory upon a baſement, ſhould be given to a houſe of the firſt elegance; the rooms will be loftier and more healthy.

It may be imagined, that when ſeveral floors are made one above another, it ſaves expence, as they are all covered with the ſame extent of roof; however, it happens quite the contrary; for although the foundations and the roof are more extenſive, the lower the building is with the ſame number of rooms, yet the height and thickneſs of walls, and depth of foundation are reduced; then likwiſe, floors, cielings and ſtairs, are retrenched, which ſave much expence, not to mention the ſtacks of chimnies, and many other articles that would be tedious to enumerate; and it is matter of wonder that buildings of one ſtory only, eſpecially where the ground plot will allow it, are not more in vogue.

To guard againſt the dampneſs of ground floors, they ſhould be raiſed ſeveral ſteps above the level of the ground, and vaulted underneath, or at leaſt, which is leſs expenſive, the joiſts of the floors muſt be laid upon ranges of dry brick; but this guards not ſo effectually againſt the moiſture that ariſes from the ground, as the vaults. And here be it obſerved for the health of the publick, that even the meaneſt dwellings ſhould never be ſuffered to have their ground floors level with the earth, but raiſed a foot or two higher, eſpecially in the country where lives are ſo much the more precious to the community, as their labour continually ſerves to provide the food and raiment of thoſe who live in eaſe and plenty.

It remains now to explain the order of the rooms, in one apartment, the uſe of each in particular, and the paſſages leading to and from them, that they may be found with every requiſite convenience; and we may attend to the inſtructions which the French authors have delivered upon this ſubject, becauſe they, above all others, have ſtudied to contrive the moſt commodious diviſions of plans.

A grand apartment ſhould conſiſt at leaſt, of a hall, or veſtible, or lobby, of a firſt and ſecond anti-room, of a parlour, a ſaloon, a bed chamber, ſeveral light cloſets, wardrobes, &c. all adapted to the rank of the owner and his viſitors.

The veſtible leads to the great ſtairs, and communicates with the firſt anti-rooms; theſe are the places for the ſervants in waiting. The ſecond anti-rooms, are deſigned to receive perſons who deſerve better notice; they are uſed likewiſe for eating-rooms, and therefore ſhould be choſen on that ſide of the houſe neareſt to the kitchen.

The ſaloon, or room for company, opens generally into the ſecond anti-rooms: on ſome particular occaſions it is uſed as a ball or muſick room, or card room, being, after the gallery, the moſt diſtinguiſhed for ſize.

If

If on the ſame floor there is made a bed chamber, it is more for parade and ſtate than for uſe.

The principal cabinet or drawing room, is a place deſigned to receive ſuch perſons of rank, who come to treat about any affair. It muſt be ſo diſpoſed as to be entered through the anti-room, without paſſing through the whole range of ſtate rooms.

Another cloſet is deſigned for writing and reading; this ſhould communicate with a gallery, whenever the expence and the plan will allow of it: ſuch a place is very convenient to walk in for recreation and exerciſe, in the intervals of reading or writing.

The gallery is the room that we ſhould moſtly endeavour to render magnificent. The length of it is generally three times the breadth, it may be adorned with bronzes, marble buſts and ſtatues, pictures, and ſuch other valuable curioſities.

The wardrobes are contiguous to the bed chambers; they open into the ſecret paſſages that the ſervants may not be obliged to paſs at all times through their maſter's apartments. The waiting women, or valets de chambre, ſleep in the wardrobes, to be near at hand when wanted, or if called up in the night.

The dreſſing rooms, with toilets, &c. are placed near the ſtate bed-room and wardrobe.

An apartment for baths. Theſe baths ſhould have the conveniency of being made hot or cold, from different pipes and ſtoves, as the ſeaſon of the year or the caſe for bathing may require.

The ſecond rate apartment is compoſed of fewer rooms, and the inferior apartments ſtill of fewer in proportion; in every one the rank of the perſon who is to inhabit them, is to be conſidered, and the uſe that is to be made of each room. We ſhall give two or three plans, to ſhew, by way of examples, the manner of diſpoſing the ſeveral conveniencies; and the ſituations of what we have already mentioned, as anti-rooms, ſaloon, ſtudy, wardrobe, bed chambers, galleries, &c.

The neceſſary rooms for the ſervice of the kitchen, are a ſervant's common room, the ſcullery, larder, pantry, cellars, &c.

The right diſtribution of all theſe neceſſary places, is very convenient; every thing is kept in its place, and thus a moderate ſized kitchen is ſufficient; whereas formerly it was made very ſpacious, as it ſerved for all the purpoſes. There ſhould be in every kitchen, plenty of water, either by a pump or pipes from a reſervoir.

The offices ſhould be compoſed of four contiguous rooms; the firſt is for the common room of the ſervants out of livery, and here is kept the table for them. Herein ſhould be a ſtove for making tea and coffee, &c. and a little ciſtern with water, as it is often wanted and ſerved up.

The ſecond room is ſurrounded with tables and ſhelves; here the deſerts are arranged, and the table linen for preſent uſe is kept.

The third room, is properly the houſe-keeper's ſtore-room, the china ware, glaſſes and plate, after being uſed, are here locked up; and the fourth room is the houſe-keeper's or butler's bed chamber, for the greater ſafety of the things under their care.

The ſtairs that go down into the beer and wine cellars, ſhould be contrived to be near the butler's office, for the greater readineſs in bringing up the liquors, and that they may always paſs under his eye.

In very conſiderable houſes three ſeparate ſtables are neceſſary, otherwiſe the building muſt be ſufficiently ſpacious to be divided into three. One for the ſets of coach horſes, another for hunters and other riders, and the third for ſtone horſes, or for ſuch as are ſick. But theſe things are reduced in leſſer buildings, according to the numbers required by the perſons for whom they are deſigned.

At

At one end of the ſtables is a ſpacious room with a fire place, where the beſt ſaddles and richeſt harneſſes are kept; over this room is the bed-chamber for the coachmen and grooms: beſide this, there ſhould be a forge, with neceſſary utenſils, eſpecially for a very grand houſe, or a country ſeat at ſome diſtance from a village. Over the ſtables are the hay-loft and granary; above the coach-houſes, of which nothing particular can be ſaid, are the bed-chambers for the footmen. The landry and brew-houſe, waſh-houſe, ſlaughter-houſe, &c. in the country, are ſituated as conveniency and their uſes may require, obſerving, that all the buildings be ſubordinate to the main body.

PLATE I.

DESIGNS OF A TEMPLE.

It may have been obſerved, that the temples of the Grecians varied in their dimenſions and in their characters; this variety offers us a choice, wherein we need only conſult propriety, and the intended expences.

The temple in Antis, the Proſtyle, and the Pſeudoperipteral, offer us plans and elevations that would come within the expences commonly allowed for the building of a church, and therefore might be introduced as the moſt ſimple and general deſigns: but whatever ſimplicity and plainneſs may be required, the edifice muſt be characterized from one or other of the Grecian orders; the church of Covent Garden, would not have incurred the diſgrace it has in the opinion of many people, if the portico, inſtead of the Tuſcan, had been adorned with Ionic columns; the cornice of the entablature then would have been ſtill plainer, and without that appearance of a barn's eves, from the monſtrous projecture of the joiſts; the expences would not have run higher, excepting in the workmanſhip of four Ionic capitals. We don't preſume to attack the reputation of the great architect, but the meanneſs of thoſe who tied up his hands.

In great and opulent cities, ſufficient ſums are now and then found for the execution of more magnificent deſigns, with the better ſort of materials, viz. free-ſtone: then the peripteral or pſeudodipteral temples might take place; but no incumbrance ſhould be admitted that could deſtroy the beauty of the portico and of the anti-temple: therefore the pediment or roof ſhould not be loaded with that Gothic part of our churches, a tower and its ſpire; yet as theſe can ſeldom be diſpenſed with, let them be placed at a ſmall diſtance, and detached from the back front, as we have diſpoſed it in the deſign: the tower and ſteeple of St. Martin's in the fields, and ſeveral others, ſeen from without, appear to ſtand upon the roof, and to have no other ſupport, for which reaſon we have endeavoured to alter this diſpoſition.

Fig. A. Half the plan of a Corinthian Octoſtyle, pycnoſtyle, peripteral temple. It is called peripteral, tho' there are columns only to the front and the two ſides. The great external order forms the portico and wings on each ſide; the leſſer columns within the plan, are for two orders, one above the other, to be contained in the height preſcribed to the great order. The plans of the leſſer columns of the ailles, or internal wings, are placed as much within the walls, as the external of the diameters of the great orders, is diſtant from the walls without. The altar is oppoſite to the great door, or principal entrance.

B. The elevation of half the portico.

C. Half of the ſection: herein are traced the elevations of the two internal orders, like thoſe in the hypæthral temples of the antients. The inferior order ſupports a gallery, the podium of which is placed immediately upon the architrave of the inferior order, omitting the frize and cornice. The nave is covered with a coved cieling, ſpringing from a plinth above the cornice of the ſuperior internal order.

D. The elevation of one of the external ſides, with the fifteen columns that form the wing. The walls of the back front, rangé with the extreme columns, to give more room to the cell of the temple; beſides the door in the front, there aré doors in the ſides, one to each; but whatever alterations are made, ſuch as thé ſervice of our rites require, care ſhould be taken to preſerve the beautiful diſpoſitions of the antients in the periptere and portico.

E. The plan and elevation of the ſteeple deſigned for this temple. At Venice, and in the territory of that ſtate, it is not unuſual to ſee the ſteeples erected on one ſide of the churches; but for the ſake of ſymmetry, they are beſt placed to correſpond exactly with the middle of the back front.

The common method of making high pews in churches, deſtroys the beauty of the interior ſpaces, and could only have been dictated by pride, lazineſs and avarice; another indecent abuſe, is placing the ſeats in different and oppoſite directions, ſo that the faces of the congregation are forcibly turned all manner of ways, gazing at one another; it would agree better with the ſolemnity of publick prayer and praiſe, to have all the people faced by the diſpoſition of the ſeats towards the altar; this is not meant ſuperſtitiouſly, but from a decency which might be extended to the ſeparation of the two ſexes on different ſides, in places and times, when all the circumſtances ſhould contribute to raiſe the mind above every object of ſenſual deſires.

P L A T E. II.

THE PLAN OF A CHVRCH WITH A CVPOLA.

The antients made the plans of their temples either ſquare or oblong, circular or polygonal; but we know of no examples, wherein they inſcribed the circular dome within a ſquare or an oblong: this invention of ſuſpending a cupola in the air gives an additional variety for ſacred edifices, and if executed with due regard to the ſimple principles of the antique, makes an agreeable contraſt in a proſpect, with the other buildings of a town; how happily have they been introduced in the fineſt pictures of Claude and Pouſſin.

In this plan we have deſigned a monopteral colonade to ſupport a cupola, whoſe internal diameter is the exact breadth of the nave, which is ſixty feet wide; the columns of the naves are in file with part of thoſe which ſupport the cupola; the general intercolumniation is dyaſtile, excepting the four aggregated columns ſerving inſtead of piers at each angle of the ſquare, (wherein the circle that deſcribes the circumference of the cupola is inſcribed,) and ſome others at the ends. The altar is placed in a hemicycle, oppoſite to the principal entrance; there are two other entrances to the tranſcept, and each has a tetraſtyle portal.

The portico is hexaſtyle, and is flanked on each ſide with a ſteeple; theſe do not interrupt the pediment: the other columns placed externally to the ſides and poſticus, are intended as butreſſes, and anſwer all the purpoſes of thoſe rude Gothic maſſes; for they equally ſtrengthen the foundation, by procuring it an additional breadth, and by the union of their entablatures with the ſuperior part of the wall, they add to their ſolidity in the two points, the baſement and the ſummit.

Throughout the whole, the author has aimed to take all poſſible advantages from the diſpoſition of inſulated columns, both externally and internally, as nothing contributes more to the majeſty of a building; a beautiful example of the latter is ſeen in St. Stephen's, Walbrook, in London, already mentioned; and abating ſome inconſiſtencies in the ornamental parts thereof, it ſhews the beauty of periſtyles, far more pleaſing than the heavy piers of arcades which have been ſo generally and indiſcriminately adopted.

The

The two churches, St. Genevieve and the Magdalen, now building at Paris, though intended to revive the antique diſpoſition of inſulated columns, if examined from the deſigns publiſhed, do not ſeem to promiſe that purity which might have been introduced; however, they will deſerve the attention and applauſe of the publick; for as it has been heretofore obſerved by others, never will any edifice, in all likelihood, be undertaken with a view to exceed by its immenſity, or in rich materials, the baſilica of St. Peter's at Rome; but it may not be impoſſible to imagine one of ſuperior diſpoſition, with chaſter decorations: theſe were the means which diſtinguiſhed the Grecians from other people, whoſe knowledge of art was previous to theirs: the Egyptian buildings were of much greater extent; nevertheleſs, the deſigns of the Grecian temples were ſo highly approved, that the Romans adopted them ſolely: they are again revived in theſe times; while the Egyptian architecture has fallen into oblivion, being only known to a few of the curious, who contemplate its ſingularities in their cloſets, from the ſketches and accounts of travellers.

PLATE III.

THE ELEVATION OF THE PRECEDING PLAN.

Here we may obſerve the towers and ſteeples are raiſed on each ſide the hexaſtyle portico, without interruption to the pediment; the cupola appears between the ſteeples in its full breadth, it is deſcribed hemiſpherical, and its interior height is equal to twice its diameter; there are windows in the circular walls which ſupport the cupola: the columns of the portals to the lateral doors advance beyond the towers, and contribute to enrich the ſcenery of the perſpective.

Many other forms for churches may be deſigned, wherein any one of the Grecian orders, or part of their members might be applied with all due propriety. Every art has its eſſential limitations, ſuch is proſody to poetry, and ſo are the notes to muſick the ſcience of conducting ſounds under certain meaſures of tune and time; and as theſe may be infinitely diverſified by men of true genius, the ſame may be ſaid of the various compoſitions in architecture.

It is in more ſenſes than one, a lamentable ſight to ſee the walls of parochial churches crouded with monuments, inſcribed to ſo many inſignificant names: the publick uſe of vaults under churches for the reception of the dead, ſhould be entirely aboliſhed, the offenſive effects ariſing from them, have more than once been a juſt cauſe of complaint to the inhabitants of London.

All burial places or cemeteries, are beſt placed upon the ſkirts of a large town; they ſhould be ſurrounded with walls, and within theſe ſacred grounds might be erected here and there certain little mauſoleums, which belonging to the publick, ſhould not admit of the traces of private vanity, but at very expenſive coſts, which might be applied for ſuch exigencies as the prudence and generoſity of the diſintereſted might determine. We do not intend to ſpeak in this place of thoſe for great and noble families, who paſs their lives in a ſtate of ſeparation from the community, and whoſe aſhes are ſecured from being mingled with thoſe of the vulgar.

To conclude; parochial churches, ſhould be ſituated nearly in the center of their pariſhes, for the mutual conveniency of the pariſhioners, and every church ſhould ſtand in an open place, to ſhew the building to advantage, and for the benefit of a free circulation of light and air.

PLATE IV.

CENOTAPHIVM HEROVM.

This deſign was intended to be offered for the machine of a grand fire-work, at the concluſion of the late ſucceſsful war. The plan is underneath the elevation, and both upon the ſame ſcale.

The

The principal fabric A in the center, repreſents it is the elevation we explain, a vaſt cenotaph, or empty tomb, ſacred to the memory of illuſtrious naval and military heroes; it is a rotonda open at top like the ſepulchre of Cæcilius Metellus, but is adorned with a periptere of Corinthian columns; the baſement of theſe are founded on rock work, and the ſame rock is continued upon the right and left for the arcades, wherein lamps are ſuſpended. B. B. Two leſſer pyramidal cenotaphs, one on each ſide the rotonda: theſe may bear ſome ſuitable inſcription in praiſe of the fleets and armies. In the arcades underneath theſe pyramids are placed in one, the ſtatue of Europe, in the other that of America, and to the backs of theſe, Aſia and Africa; above the lower center-arcades of the right and left wings, are two other arcades D. D. raiſed with pediments; under one is placed the ſtatue of ſecurity, leaning upon part of a column, and under the other is the ſtatue of liberty, with the *rudis* or *vindicta*; upon the ſame plane at proper intervals, are four mural columns CCCC, and four roſtral columns CCCC, interchangeably placed: at each extremity of the ſtructure is erected a pedeſtal for a female centaur. The one F to repreſent Fame or Glory; ſhe bears a trumpet and other warlike inſtruments; her character ſhould be fierce and eager, her action ſhould appear rapid. The other E. repreſenting Peace, or *Victoria pacifera*, carries the caduceus and laurel branch; there ſhould be expreſſed on her face a placid firmneſs, her motion ſhould be brilliant but yet cadenced.

Four of the principal and commercial rivers of the globe, the Thames, the Ganges, St. Lawrence and Gambia, all of coloſſal ſize, adorn the rock-work at certain diſtances. The bas-reliefs under the flight of ſteps in the center, repreſent on the one ſide, *Victoriæ Maritimæ*, or the *Imperium Maris*; on the other, a winged Fame, ſitting under a palm tree, and tranſmitting to poſterity the glorious annals of the times.

When the antients erected durable edifices of this kind on the high ways, they intended them for the inſtruction and pleaſure of paſſengers, and to eſtabliſh the courage of every individual citizen, and of the ſtate in general, in contemplating, not the dead carcaſſes of their anceſtors, but their ſurviving virtues, and the immortality of the ſoul. *In quo certè bonis viris confidendum eſſe, malis autem formidandum, quippe cum poſt mortem omni auxilio careant.* PLATO DE LEG. C. xii.

Thus the poets ſeconded the leſſons of the philoſophers.

Tu pias lætis animas reponis
Sedibus; ——— Hor. Lib. I. Od. 10.

Sedibus ut ſaltem placidis in morte quieſcam.
ÆNEID. vi.

In what manner the different ſort of fireworks and illuminations ſhould be diſplayed and diſpoſed on this machine to the beſt advantage, will appear very plain to thoſe practiſed in ſuch ſorts of exhibitions; and it would be out of place to attempt any pyrotechnical deſcription.

Martial muſick in theſe ſhews, might be properly introduced with a grand vocal chorus, in honor of the event thus celebrated. In Plutarch's life of Pelopidas, there is cited a moſt elegant epicedium, or funeral ſong, in praiſe of the Lacedemonians: as it gives the true character of heroiſm, we cannot forbear quoting it.

" They died, but not as laviſh of their blood,
" Or thinking Death itſelf was ſimply good,
" Or life; both theſe the ſtricteſt virtue try'd,
" And as they call'd they gladly liv'd or dy'd.

PLATE V.

DESIGN FOR AN OPEN PLACE AT WHITEHALL, WITH PORTICOS.

It has often been a matter of ſurpriſe, not only to perſons of taſte of this nation, but even to foreigners, that for ſo noble a river as the Thames, in its courſe along the extent of the metropolis,

lis, there are no grand quays or elegant landing places; filth, meanneſs and obſcurity, almoſt totally cover the inhabited banks of this ſtream, from whoſe tides the gallant fleets of England ſpread its fame and commerce around the globe, and return loaded with the choiceſt commodities, and the immenſe treaſures of both hemiſpheres.

The above conſiderations, about eight years ago, ſuggeſted the ſketches delineated in this plate. At that time there were ſeveral old buildings in front of the Horſe-Guards: theſe and ſuch others as ſtood to the interruption of our plan, were ſuppoſed to be no unſurmountable obſtacles, as it was imagined they could have been removed at a very moderate rate.

WHITE-HALL-PLACE, 270 feet broad, and its length ſomething more than the diagonal of that ſquare, would have opened a grand avenue from the Thames; in the center of this ſquare, we had erected an Egyptian obeliſk, with four coloſſal ſtatues at the foot of it, repreſenting the four quarters of the globe; an idea confeſſedly borrowed from an admirable work of Bernini, in the piazza Navonna at Rome. The portico on each ſide, would have afforded a covered walk down to the river; the ſtairs at the ends of the porticos were deſigned grand and commodious for public uſe; but thoſe in the middle ſecured by rails of iron, or rather of bronze, were intended only to be opened upon extraordinary occaſions; and among others, none would be attended with greater political pomp, than the entry of a foreign ambaſſador; if inſtead of the tedious and diſmal proceſſion of a number of paltry carriages through dirty ſtreets, a ſet of barges were provided to receive the ambaſſador and his train, juſt above London-bridge, and to land them at White-Hall, whence they might proceed, in ſuitable conveyances, and properly eſcorted to the palace. Among the barges might, firſt be reckoned thoſe of their majeſties, then thoſe of the admiralty and of the city, with their ſeveral ſtandards, and colours, and ſtreamers, a number of the ſubaltern officers and ſailors of the navy attending in their ſhips boats.

Pelagoque Volamus. ÆNEID.

This would be a noble ſight, worthy of the firſt maritime power in the univerſe; and if conducted with ſplendor and order, Venice would not then be ſo diſtinguiſhed by the parade of her Bucentaur.

PLATE VI.

THE DESIGN FOR A NEW STREET IN THE CITY.

Among other improvements talked of by the citizens of London, the new ſtreet leading from the front of the Manſion-houſe, in a right line to Moor-gate, has been often upon the carpet; on which account theſe ſketches were imagined.

The ſettled ſtandard of buildings in London, ſheweth too much of œconomy; all the parts are upon a ſmall ſcale, and there wants a requiſite ſolidity for duration, which occaſions great and continual repairs; but in the latter caſe it cannot be otherwiſe, ſo long as the leaſes of the ground are granted for ſhort terms, and ſubject to fines. The author was once aſked abroad, whether it was true, that the builders in England could calculate in ſuch a manner, that they would conſtruct or repair houſes for a certain number of years more or leſs, at the expiration of which their downfall might be expected? the anſwer was in the affirmative, and ſurprized the inquirer: but how would it have added to his ſurprize, to have been told, that by the ingenious contrivance of the workmen, houſes now and then fell down as ſoon as covered in.

Had the proprietors and undertakers, who have built habitations for the Londoners, ſince the time of Inigo, thought proper to have caſt their eyes upon the houſes after his deſigns in Covent-Garden, they might have ſeen the ſcale and models for their purpoſes: ſuch a city as London, at leaſt in its principal quarters, ſhould not have any habitations of inferior aſpect. The arcades are out of the queſtion, but the mezzanine might have turned out very uſeful to many tradeſmen; they might have ſerved as warehouſes over the ſhops, to others as their own dwelling

rooms, while the principal and chamber floors over them, might with great profit have been diſpoſed to lodgers, who for more than half the year make no inconſiderable part of the inhabitants in town. Such elegant and ſpacious lodgings would certainly be preferable for whole families, to the little boxes which are built at the politer end of the town for the ſame uſes.

The differences that ſhould be between the houſes in the ſame ſtreet of a city, ſhould be in the extent of the front, ſeldom in their heights; one dwelling might have four or five windows in its front, another only half, or part of that number; yet as the heights of their floors might be the ſame, the aſpect of the latter would not become deſpicable. The habitable buildings of a capital, may be conſidered under three different rates.

I. Palaces of the princes and nobles, halls, colleges, &c.

II. The houſes of the gentry, and of other principal inhabitants.

III. The houſes of the inferior people.

And all theſe may be again ſubdivided.

The houſes in this plate are thoſe of the ſecond rate. The center houſe, and thoſe at the extremities, are larger than all the intervening ones, which are upon the ſame ſcale; a difference in the fortunes and ranks of citizens, requires a difference in the ſizes and rents of houſes.

The following heights are given to the different ſtories of the elevation in this plate.

The ground floor in the clear is - - - -	13	feet high.
The firſt floor - - - -	12	
The ſecond floor - - - -	10	
The third floor - - - -	9	
The garrets - - - -	8	

It is always more difficult to proportion the parts with the whole in the external of an edifice, than in the internal——The entire height of this elevation, is ſubdivided as follows.

The lower order, as - - - -	2	parts
Then to the top of the principal cornice - - -	3	
Thence to the top of the attic cornice - - -	1	
Total external height	6	

The ſubdiviſions of the heights of Inigo's houſes are the following.

The baſement, which includes the ground floor and the mezzanine	3	parts
Principal and chamber floors including the cornice	4	
Total external height	7	

The roofs are excluded in the above diviſions, not being conſidered as relative to them.

M. Walpole obſerves, " that in the arcades (of Covent-Garden) there is nothing remarkable; the pilaſters are as errant and homely ſtripes as any plaiſterer would make:" ſurely the quality of the materials of a ſtructure, can never be deemed to depreciate the deſigns of an architect, as the remarks juſt cited ſeem to imply.

PLATE VII.

A TOWN HOUSE WITH THE STABLES AND OFFICES.

The houſes deſigned in the laſt plate, are ſuppoſed to have their offices under ground, and their ſtables, &c. in ſome mews not too diſtant from their quarter; however, it is preferable both on account of grandeur and conveniency, to have encloſed within the precincts of the dwelling every requiſite thereto; a large plot of ground, will admit eaſily of every diſtribution, but it is often neceſſary to do this in a confined ſpace, therefore we have rather choſen to produce ſuch an example than one of greater extent.

The ſituation of the ſtreet is oblique, but this in no manner affects the regularity of the plan: we have placed the main body of the houſe within a court-yard, and its back front is ſuppoſed to have a garden which might deſcend towards the river; the Hotel d'Argenſon at Paris, nearly of this extent, has its back front upon the garden of the Palais Royal. We mention this edifice as it may be known to ſeveral travellers, and becauſe it is always right, in conſidering any plans and elevations, to compare them with ſome buildings already executed, in order to be previouſly aſſured of their effects; for oftentimes, what appears great or ſmall by the drawings to perſons not accuſtomed to dimenſions, will turn out contrary to their expectations; and an architect in deſigning ſhould propoſe to himſelf ſome ſtandard, and accuſtom himſelf to judge very exactly of meaſurements by his eye, which he ſhould conſtantly retain in his mind.

The front to the ſtreet, is that of the offices and ſtables, and over them are lodgings for men ſervants, granaries and lofts. As you enter the gate, on one ſide is the porter's lodge, and on the other a winding ſtair-caſe; there is ſhelter for two carriages, the one next the ſtables, the other next the kitchen; on each ſide the court-yard are buildings which communicate to the main body of the houſe, whoſe principal door is in one of the ſides.

PLATE VIII.

A DESIGN FOR A VILLA.

Our intention for the plans of this work, is to keep within ſuch limits as will prove of more general uſe. Buildings of twenty rooms on one floor, are as eaſy to delineate as thoſe of ſeven, or ten; it is uſual with architects, who want to diſplay their talents, to think with Dinocrates, that they muſt offer ſchemes of the moſt unbounded fancy; but theſe will anſwer no uſeful purpoſes, neither can they tend to the progreſs of their art.

The inſpection of this plan, may recall the caſtle of Caprarola to thoſe who have ſeen it; we have indeed had in view its circular inner open court, but we have retrenched its galleries, and circumſcribed it in a different manner.

The ground plan has at firſt entrance by the fore front, an under gallery of ſixty feet in length by above twenty feet broad. This ordinarily may ſerve for a ſervant's hall in waiting, and may be devoted, as is uſual, upon the annual receipts of rents for the tenants to dine in; at each end is an anti-room, twenty feet ſquare, from that upon the right you enter into the billiard room, and proceeding forward, the next is the library; this opens upon the great ſtair-caſe, which only aſcends to the principal floor: the room upon the ground floor, on the other ſide of the great ſtairs, may be called a breakfaſt room; beyond this is a little cloſet that may be encloſed as an accompting-office, and next to it is the gentlemen's gun room: the heights of all theſe rooms in the clear is eleven feet. The diſpoſition of the two triangular ſtair-caſes, and of the little circular winding ſtairs, give all the advantages of ſecret paſſages to the different rooms.

The

The arcades of communication with the wings, afford a covered paſſage to and from the main body of the manſion.

The plan of the principal floor is traced upon that of the baſement floor, allowing for the diminution of the walls: to the fore front is the gallery, above ſixty feet in length and more than twenty broad, the height in the clear is twenty four feet; but all the other rooms upon the ſame floor, are only fourteen in the clear, becauſe of the mezzanine above them, which is eight and a half in the clear.

On each ſide the gallery is an anti-room; from that on the right you enter into the eating room, and on the other end is the drawing room; paſſing through the great ſtair-caſe is another drawing room, thence you may paſs on to a dreſſing-room, and then to the ſtate bed-chamber.

The mezzanine and chamber floor over it, are divided for the neceſſary uſes of the family and of their viſitors. There are no garrets in the roof.

The court-yard for the kitchen and offices, is ſurrounded on three ſides with buildings, wherein it is ſuppoſed that every neceſſary requiſite is ranged in its proper place.

The court-yard for the ſtables, coach houſes, &c. has its buildings in ſymmetry with thoſe on the other ſide; the oblique poſition of the wings, and every other ſeeming irregularity of the plan contributes to render the whole more commodious than it otherwiſe might be, and is very advantageous to the ſcenery of the elevation; for by the divergency of the lines from the fore front, there is opened a far more extenſive proſpect than by the common method of advancing the wings at right angles to the front, upon a level ground.

In the diſtribution of this building, though of moderate ſize, there is a great range of rooms, and the ſecret paſſages are diſpoſed without encroaching upon any room; the ſpan of the roof being ſmall, renders it both light and ſtrong.

Theſe are the heights of the ſeveral floors in the clear;

For all the rooms in the baſement - - -	10	feet
The gallery coved - - -	24	
The other room upon the ſame floor - - -	14	
To the mezzanine over theſe, one foot ſix inches being given to the height of the intermediate floor - -	8	6
To the chamber floor - - -	10	

PLATE IX.

ANOTHER DESIGN FOR A VILLA.

As in the former deſign we endeavoured at a diſpoſition that at firſt appearance might have an irregularity, and be on that account ſtill more commodious; in this deſign we have given an elevation which would produce an effect as ſingular as pleaſing, by its pyramidal aſpect; we are ſuppoſed to take the advantage of a riſing ground for the center of the building, and by its declivity on each ſide, all the parts upon the right and left are kept in a gradual ſubordination. The three pediments to the main body become very deciſive objects, and ſerve for the reſpective roofs, the ſpaces between theſe are flat terraces. The pavilions adjoining to the main body, one at each ſide, are finiſhed by the continuation of the Doric cornice, above which is a parapet: the arcades have at their extremities winding ſtairs, which deſcend into the courts. The arcades in the baſement include two floors, for apartments of different uſes, and cellars underneath, with groined arches.

The

The plan of the principal floor has the following diſtributions; entering by the veſtible, on the right hand you paſs into the firſt anti-room, and then into a ſecond, this opens into a gallery fifty four feet long by more than twenty broad; the ſecond room opens likewiſe into an eating-room, twenty-four feet by eighteen, thence you paſs into a library; between this and the firſt anti-room, is a private ſtair-caſe; the library communicates on the other ſide with a drawing-room; between the veſtible and the drawing-room is the great ſtair-caſe; from the drawing-room, you paſs into a ſtate dreſſing-room, and then into the bed-chamber; from thence paſſing through a ſort of wardrobe, you enter into the other pavilion, which is partitioned for a chapel and the chaplain's chamber, and theſe have other communications from without.

The chamber floor is traced upon the walls of the principal floor, but there are no garrets over this; the belvedere is raiſed on a ſuppoſition that it commands ſome very deſirable diſtant proſpect.

The back front may be eaſily deſcribed from the plan.

The buildings which ſerve on one ſide, for the ſtables, coach-houſes, &c. and on the other, for the kitchen, offices, &c. though brought forward beyond the main body and the pavilions, yet being placed upon much lower ground, are no obſtruction to the view from any part of the houſe.

Theſe two deſigns for villas are nearly of the ſame rate, and while we enjoy all the pleaſure that can ariſe from the imagination, in ſuppoſing them ſituated amidſt the rural varieties and beauties of nature, we cannot forbear lamenting the preſent prevailing cuſtom of the great ones, in abandoning, for the greateſt part of the year, their delightful ſeats and retirements, which oftentimes ſeem raiſed more for the pleaſure of chance-led travellers, and of the neighbouring villagers, than for the real enjoyment of the owners.

O Vinitores, Vilicique felices
Dominis parantur iſta, ſerviunt vobis. MART. Lib. 10. Ep. 30.

PLATE X.

A HVNTING PAVILION.

It may ſo fall out, that the principal ſeat of a nobleman fond of hunting, is at a great diſtance from a favorite ſporting country, and having a property therein, he might on both theſe accounts be tempted to make a building, for his own pleaſure, and the reception of a few ſelect friends, at different times during the hunting ſeaſons.

The plan and elevation here before us, it is imagined may anſwer the above intentions, being entirely accommodated for the uſe of the gentlemen, their ſervants and horſes, who are all lodged under the ſame roof. We have called it *Padiglione di Caccia*, or hunting pavilion, from its peculiar deſtination.

The plan conſiſts of three octogons, one within the other. The largeſt, or external one, contains the ſtables, ſervants hall and bed-rooms, kitchen, offices, and ſtore-room; theſe are all ſunk below the ſurface of the ground, the ſoil being ſuppoſed to be exceeding dry: as we would pitch upon the ſummit of a little hill, this would be favourable for the drains underneath; the baſement does not riſe more than four feet above the ground line, and receives its light from ſemicircular windows. The next elevation upon the ſecond octogon, contains the bed-rooms, or cabbins for the gentlemen, and a drawing-room: level with theſe is the hunters common hall, raiſed upon the internal octogon; it receives its light from windows placed above. The ornaments here muſt be adapted to the building; the ſculptor and the painter might be aſſiſted in their compoſitions, by the deſcriptions of the poet.

Vincula pars adimunt canibus: pars preſſa ſequuntur
Signa pedum:
Sternitur in curſu nemus & propulſa fragorem
Silva dat: exclamant Juvenes.

OVID. Metam. Lib. VIII.

Hunting is a noble diverſion, it gives ſtrength and vigour, and inures the body to hardſhips; to ſenſible minds, inſtruction always attends on pleaſure. The young warrior may in his chace, ſtudy the advantages and diſadvantages of ground, at one time in vallies, and at others on eminences; here a narrow paſs will offer itſelf, and there an extended plain; in all theſe he may reflect upon the advantages and diſadvantages of poſts and encampments. The fable of the unfortunate Actæon offers a very eſſential caution to thoſe in high ſtation, to guard them againſt the danger to which they are unavoidably expoſed, from their flatterers and paraſites.

Undique circumſtant merſiſque in corpore roſtris,
Dilacerant falſi dominum, ſub imagine cervi.

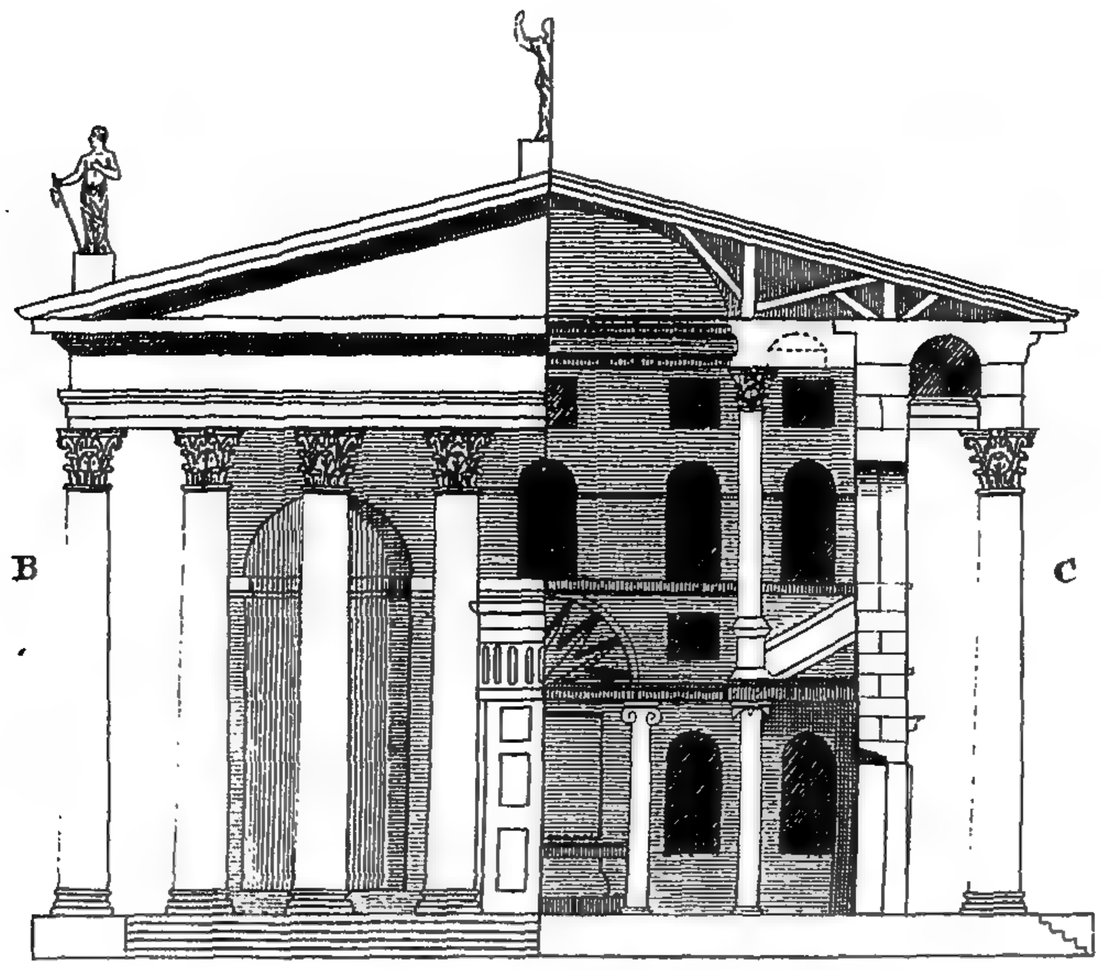
OVID. Metam. Lib. III.

The kennel is not inſerted in our plan; its ſituation is ſuppoſed near at hand, in the wood; and it would be convenient to have at no great diſtance, three or four hovels of cottagers, which would form the only neighbourhood of this edifice ſacred to the ſports of the fields and woods.

THE END.

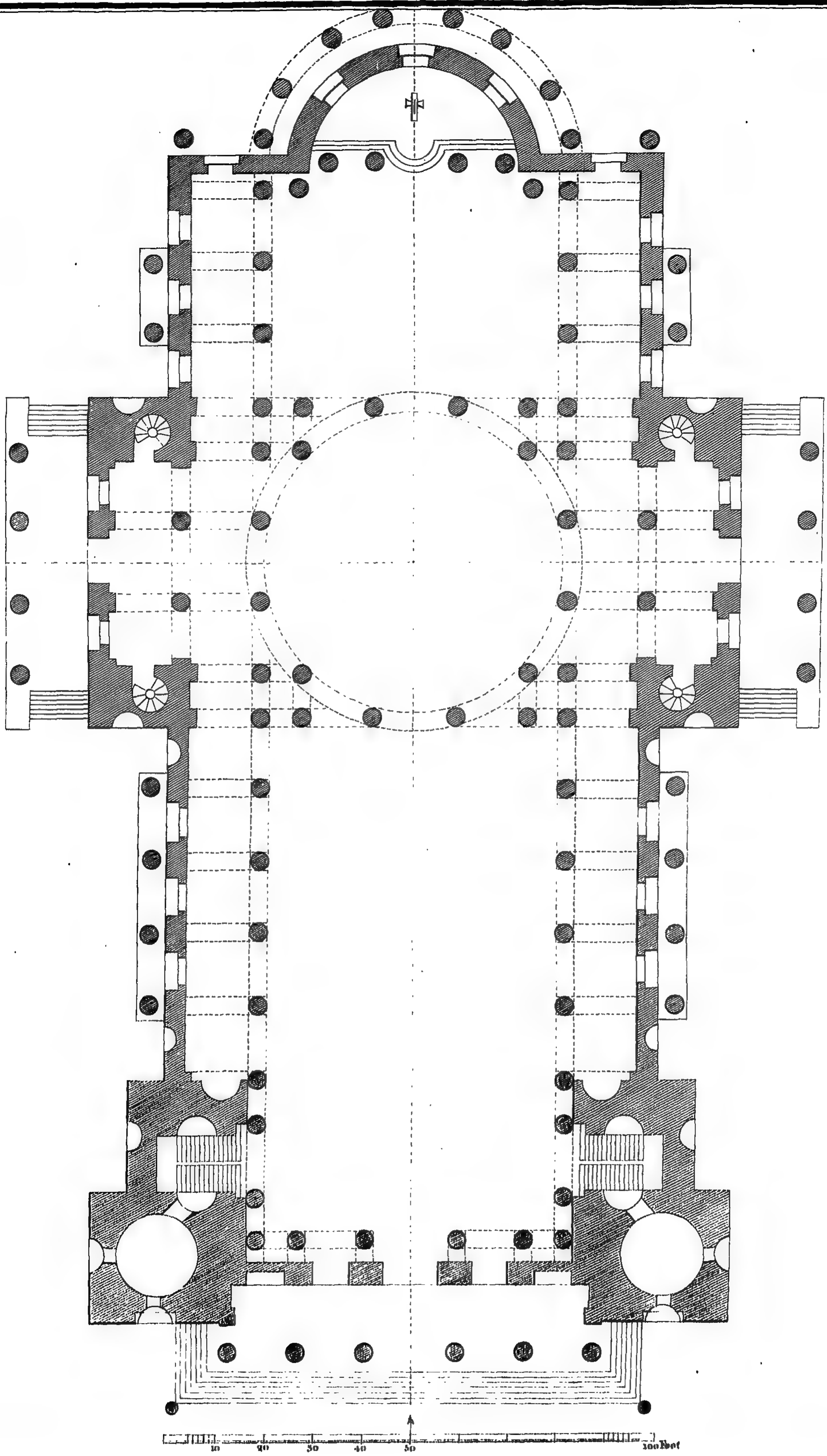


The Design of a CHVRCH after the Manner of an ANTIQVE TEMPLE.



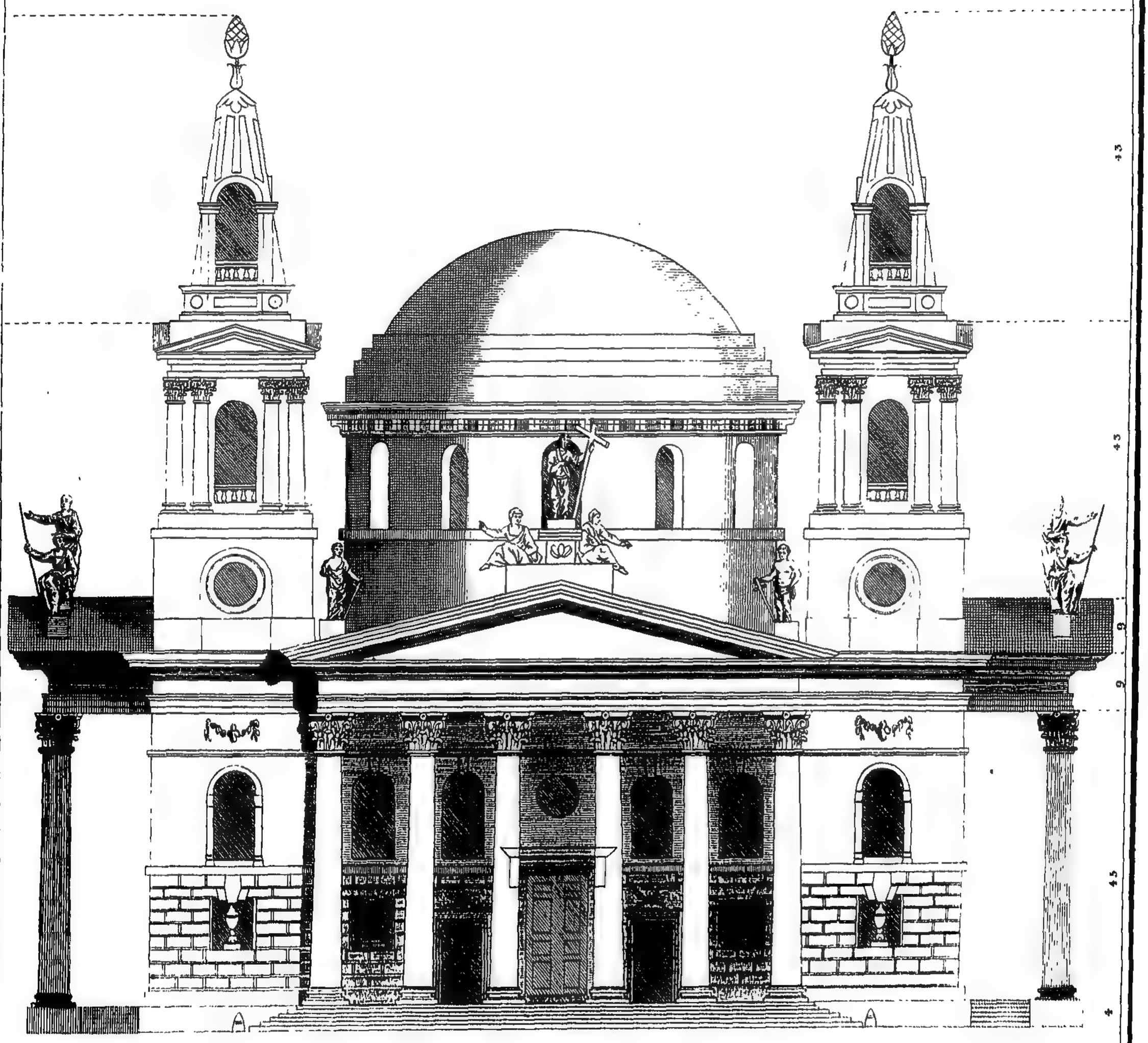


S.R.delin: 1767.



S.R.delin 1767.

THE FORE-FRONT.

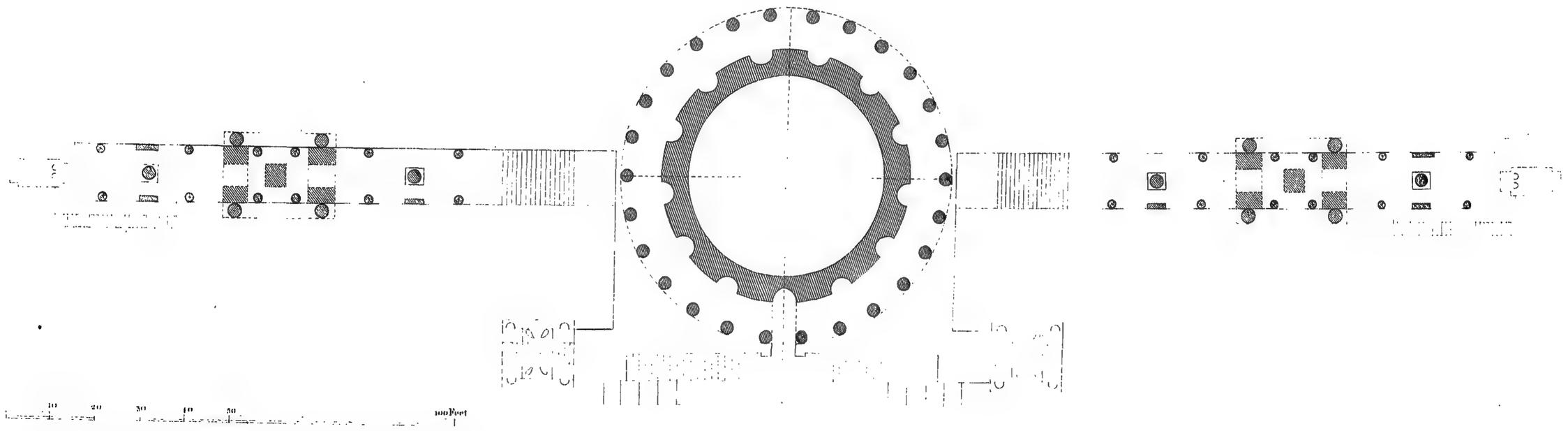


S.R. delin: 1767.

CENOTAPHIUM · HEROUM.

A GRAND MACHINE FOR FIREWORKS.





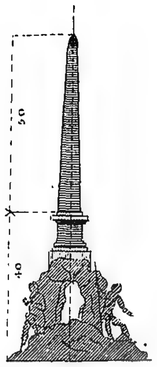
S.R delin.1765

The Elevation of the Portico.



One end of the Portico.







HORSE GUARDS

Street before the HORSE GUARDS

WHITE HALL

EUROPA
ASIA
AMERICA
AFRICA

PLACE

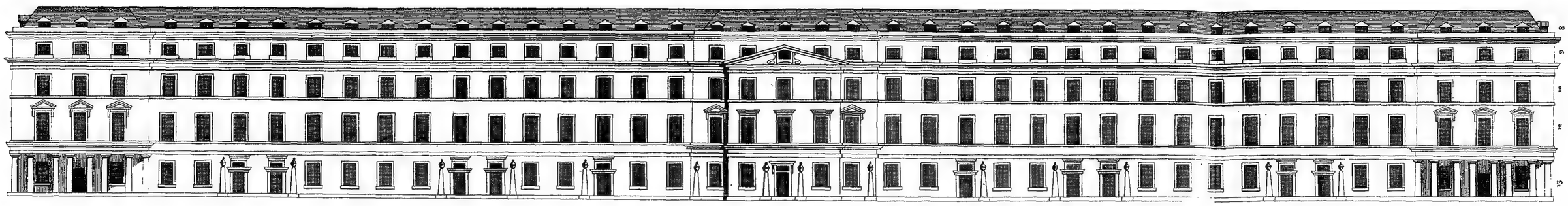
THAMES RIVER

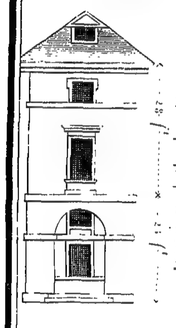
of the Banqueting House

Corner

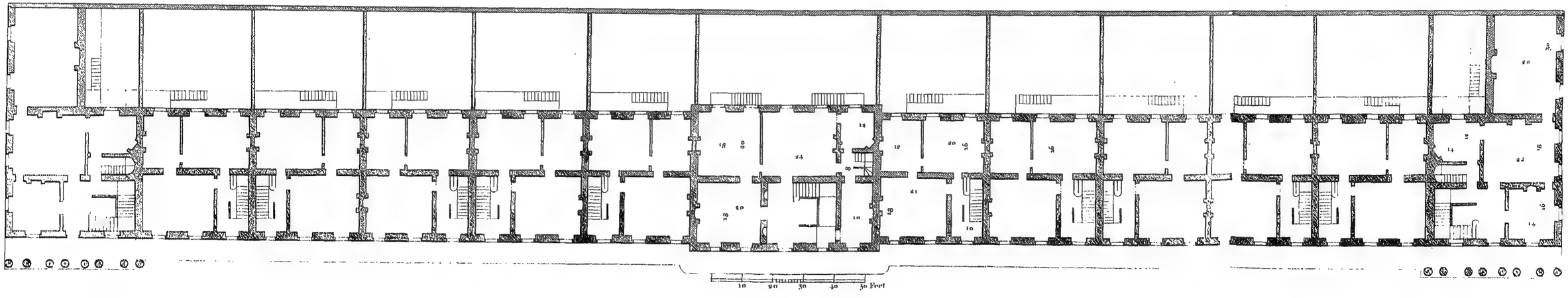
S.R delin 1767.

DESIGN for a NEW STREET in the CITY.



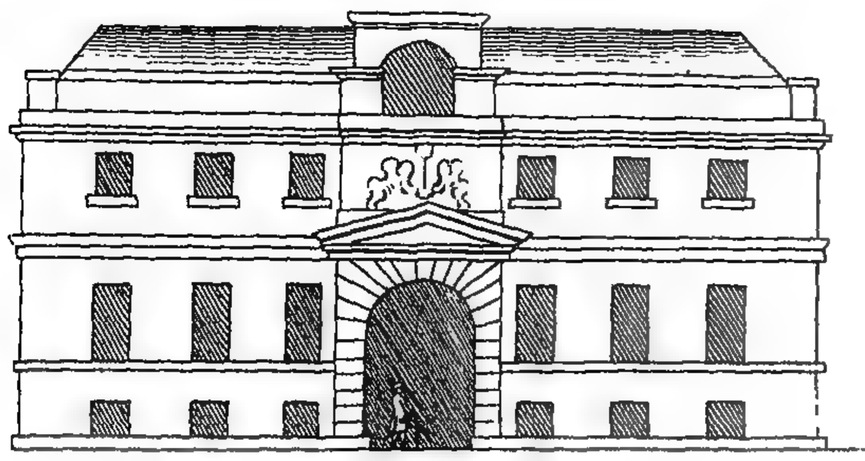


DIVISION of the height according to large lines for the middle floors

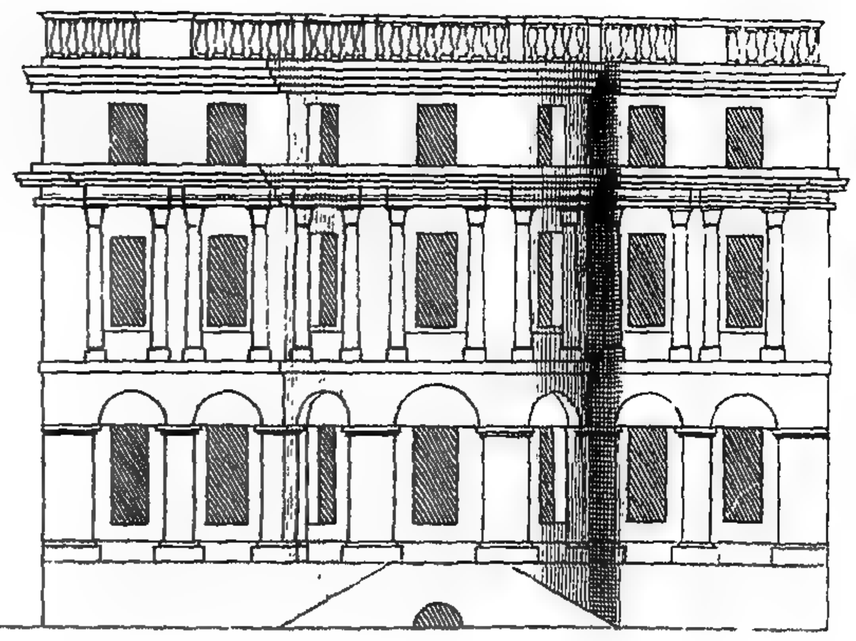


S. R. delin. 1767.

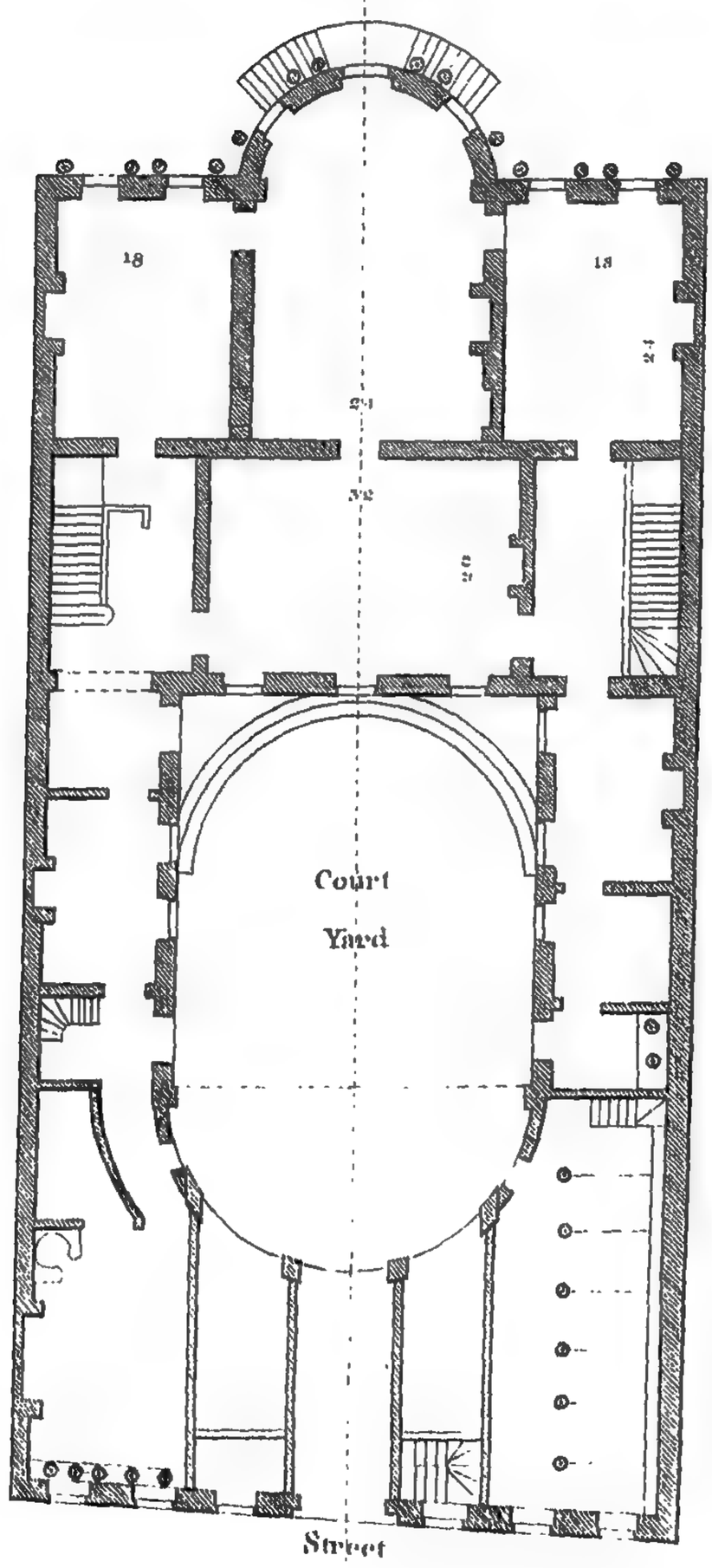
Elevation to the Street.

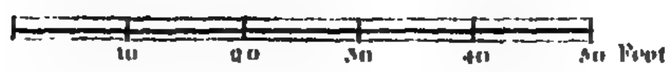


Elevation of the back FRONT.



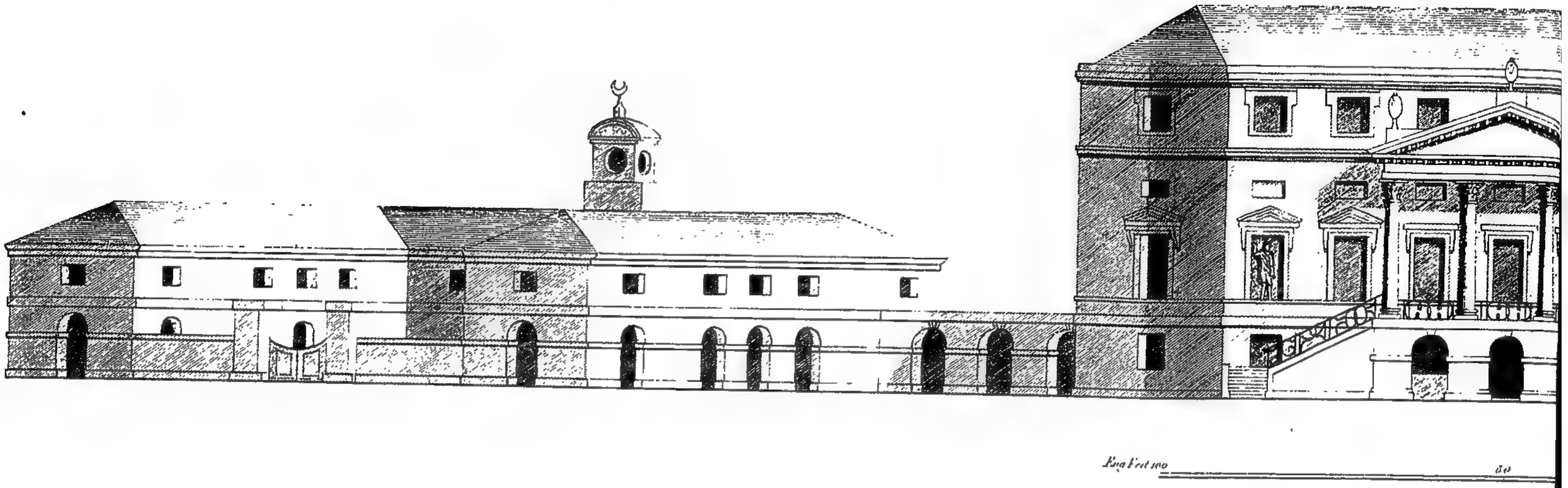
The Plan





S R delin: 1767

Elevation of the Fo



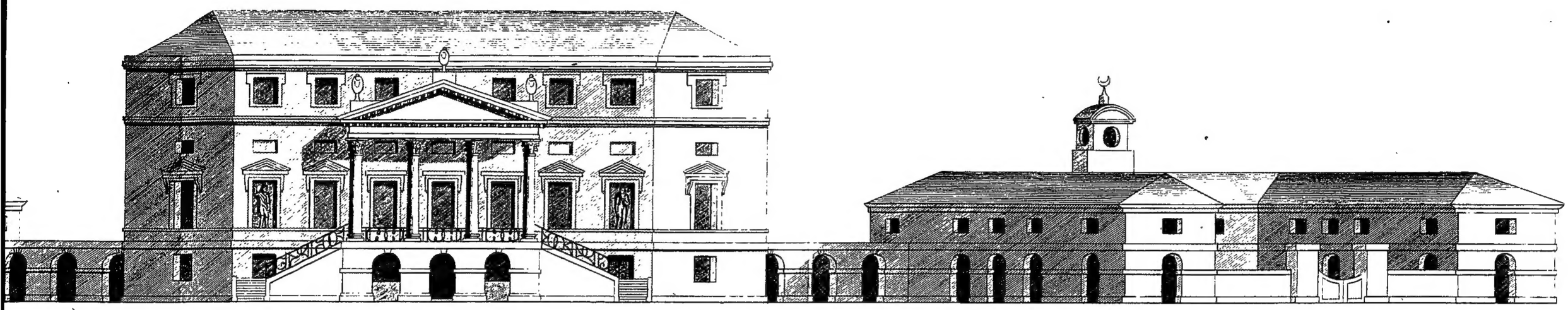
Engd Pubd 1st

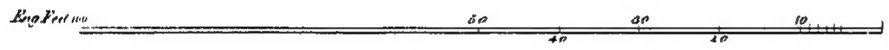
Court Yard for the Stables Coach Houses &c.

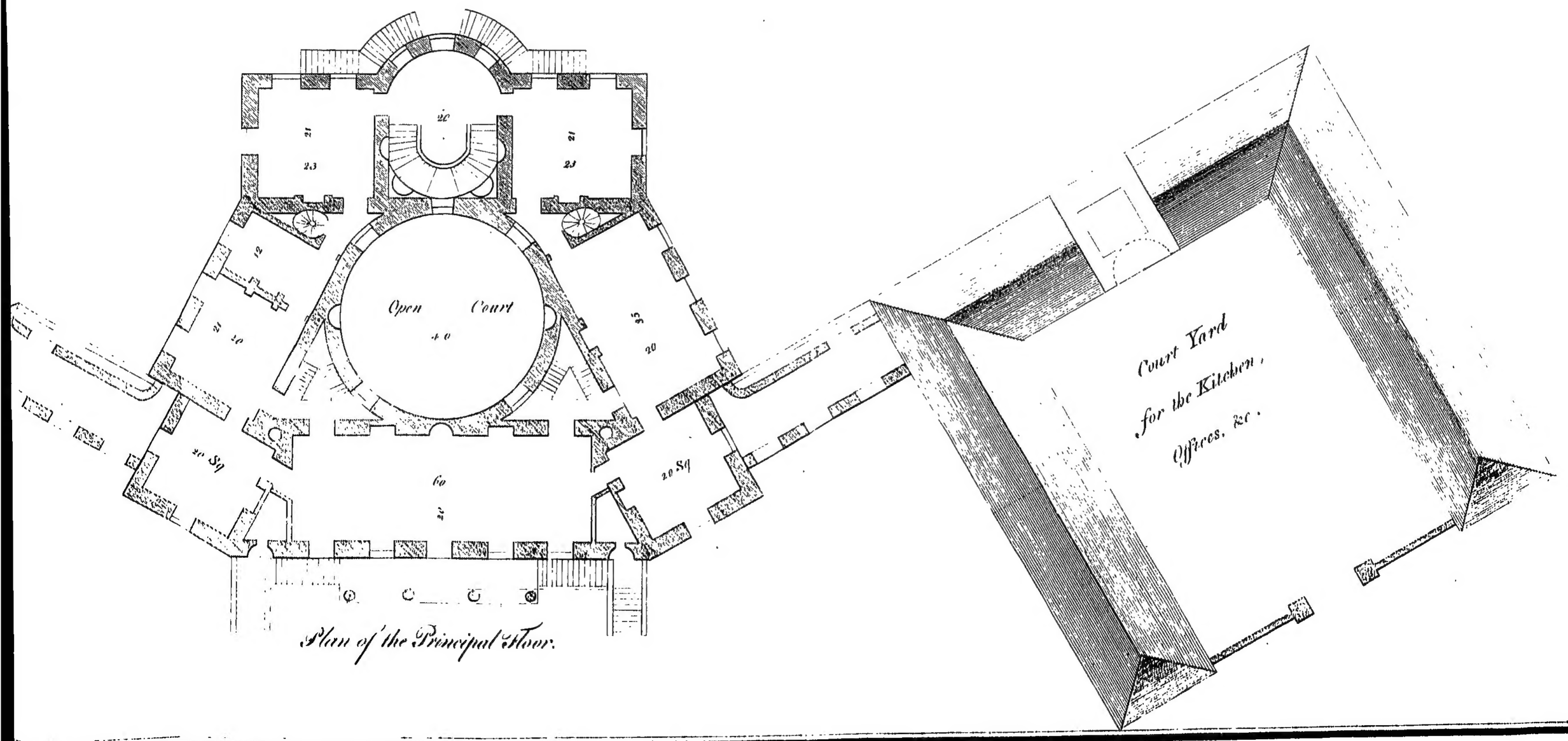
Plan of the Princip

Berlin 1767

Elevation of the Fore **FRONT.**

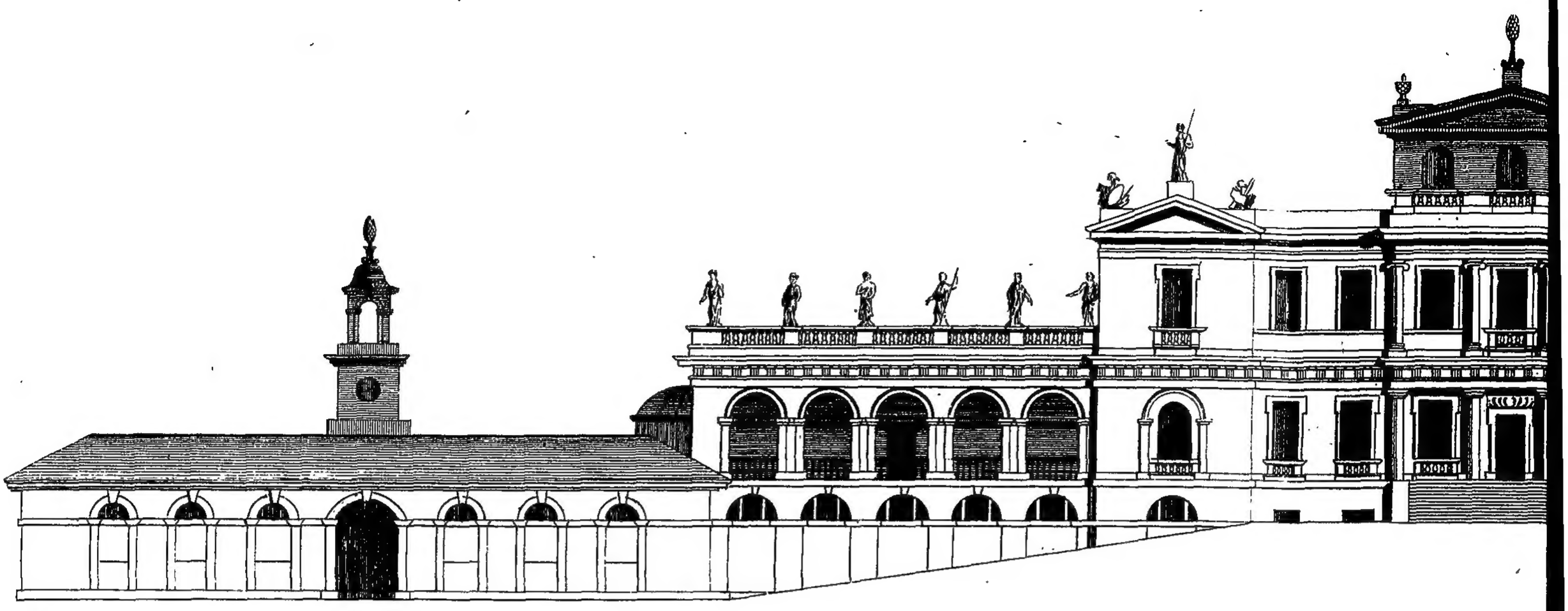






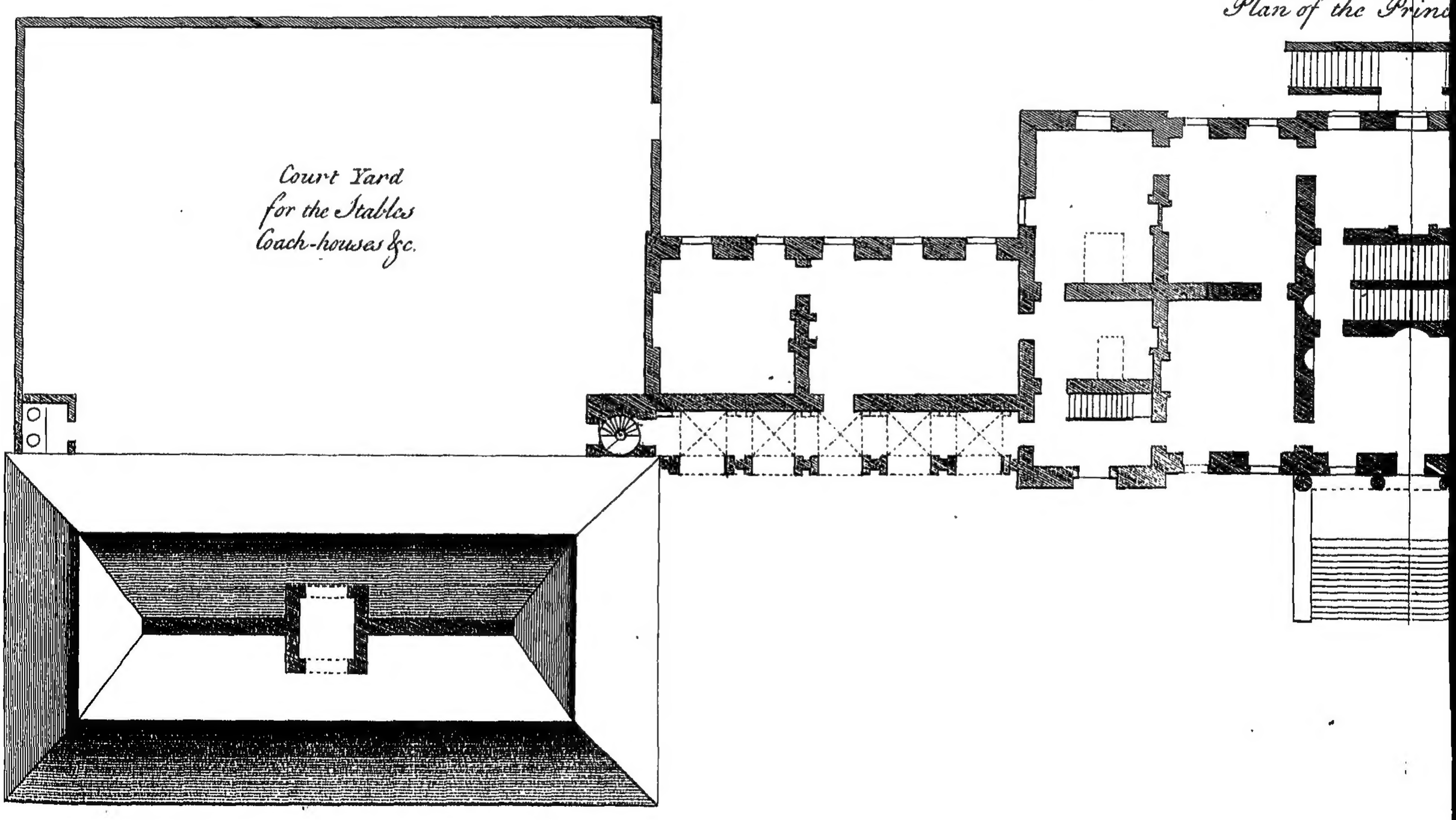
Plan of the Principal Floor.

Elevation of the S



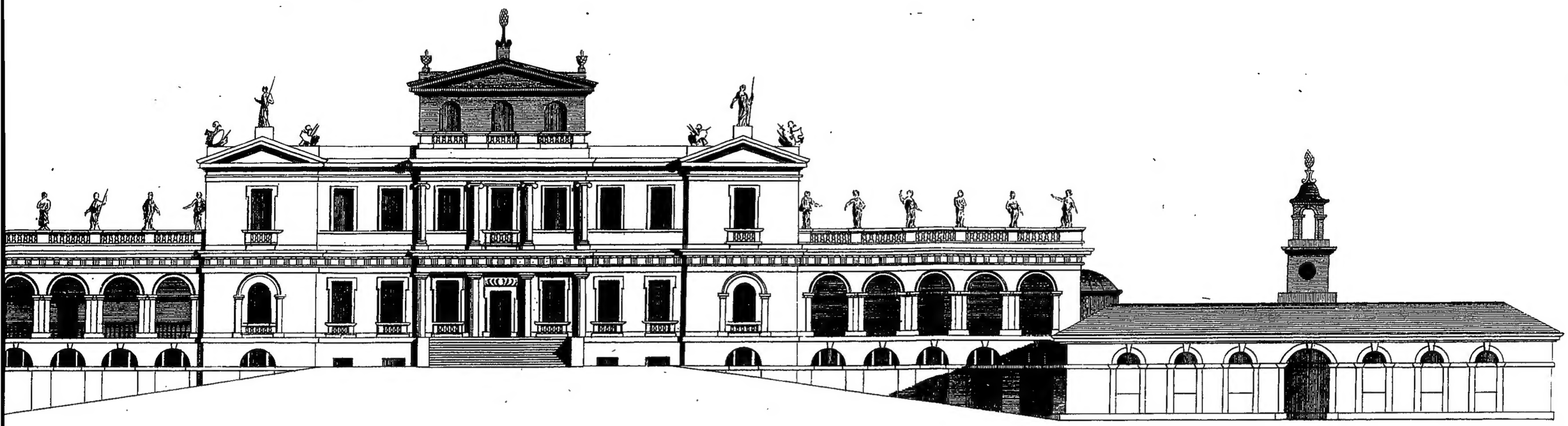
50

Plan of the Princ



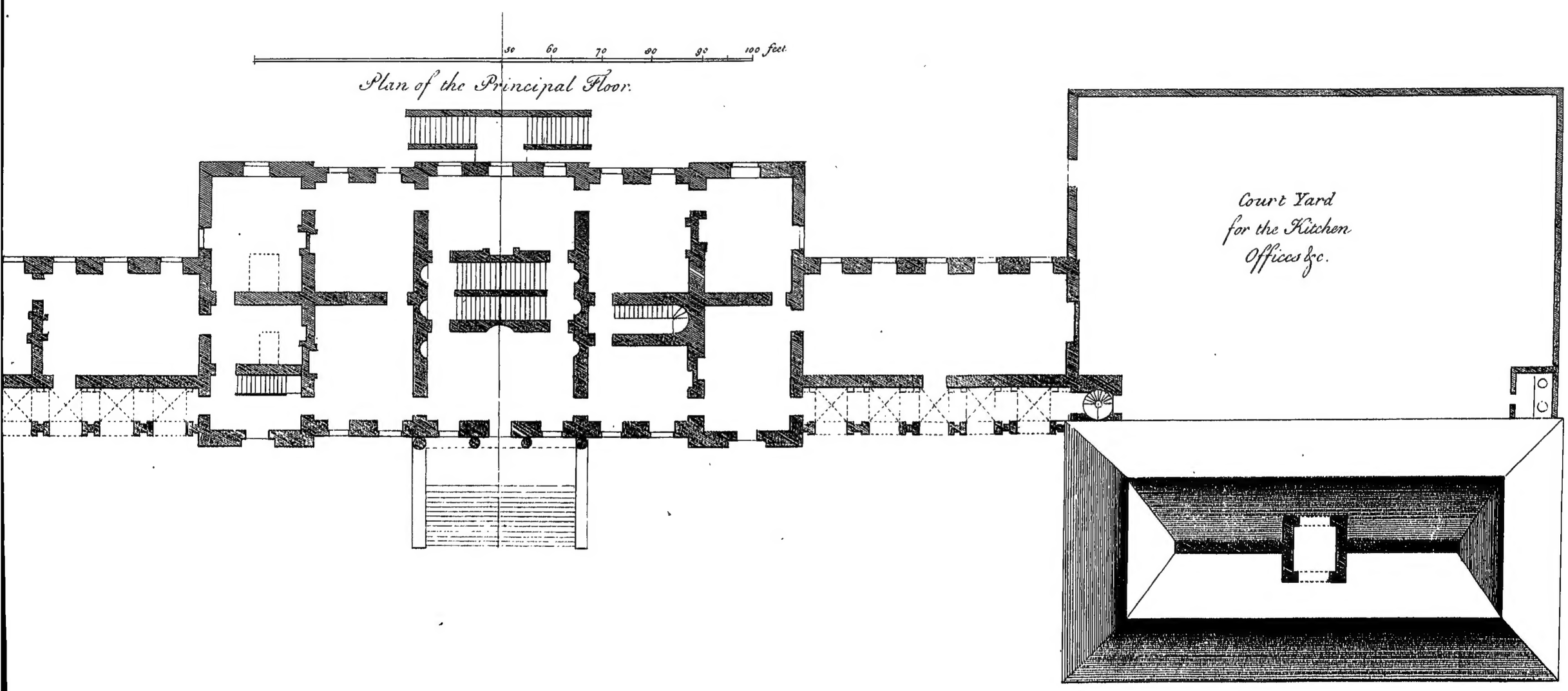
R. delin: 1767.

Elevation of the Fore **FRONT.**

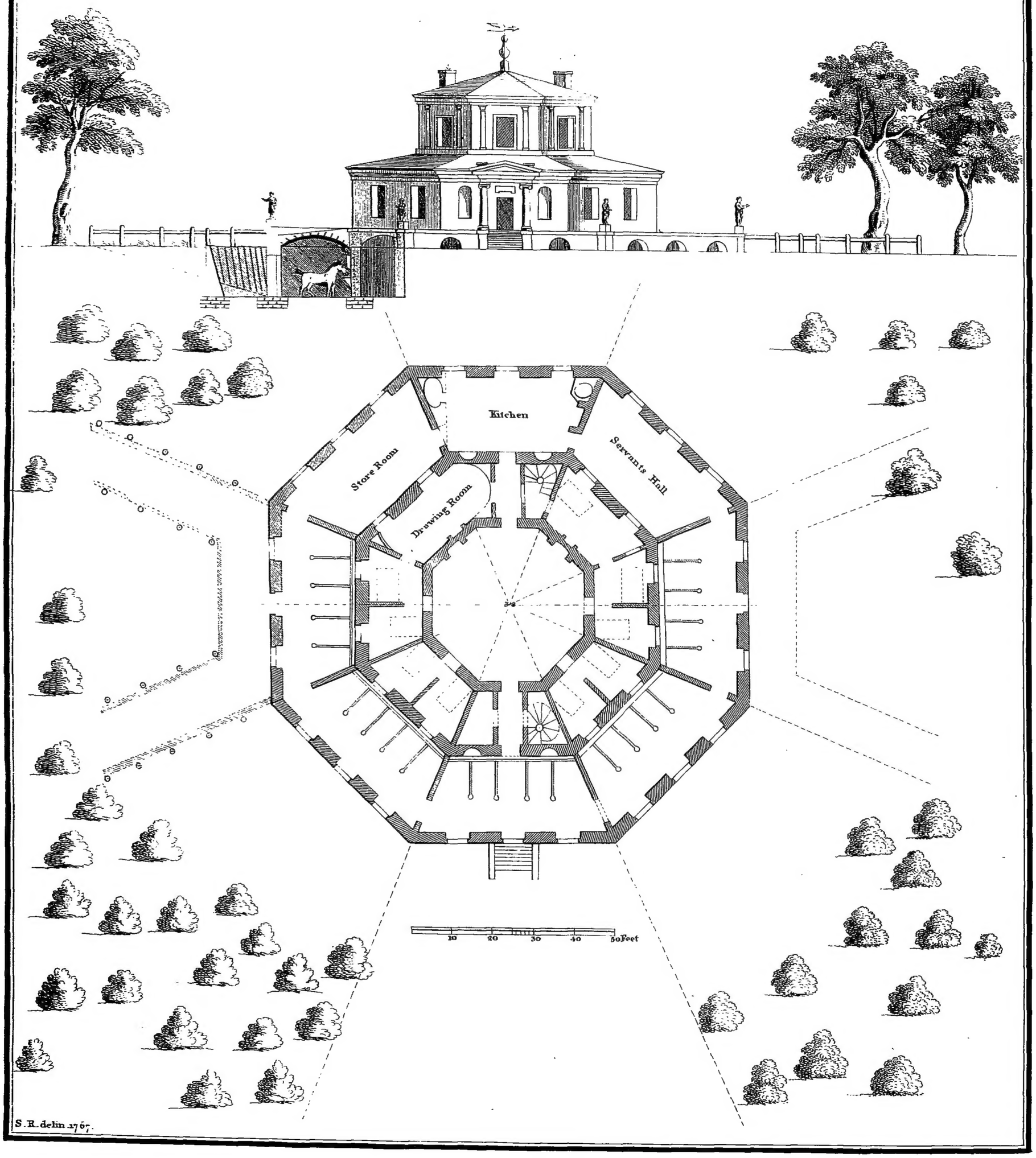


50 60 70 80 90 100 feet.

Plan of the Principal Floor.



PADIGLIONE DI CACCIA
OR
HVNTERS HALL.



S. R. delin 1767.